



# **Support for Setting up an Investment Promotion Desk in the MEW**

**Report on Policy Framework for Setting up Power Projects in  
Afghanistan**

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Meghraj Capital Advisors Private Limited

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## A1: Abbreviations

ACCI	Afghanistan Chamber of Commerce & Industries
ADB	Asian Development Bank
AISA	Afghanistan Investment Support Agency
ANDS	Afghanistan National Development Strategy
ANREP	Afghanistan National Renewable Energy Policy
ANSA	Afghanistan National Standards Authority
AREP	Afghanistan Renewable Energy Policy
AREU	Afghanistan Renewable Energy Union
ASTM	American Society for Testing and Materials
Bol	Board of Investment
BIDA	Bangladesh Investment Development Agency
BOO	Build Own Operate
CCO	Chief Commercial Officer
CDC	Community Development Centres
CEB	Ceylon Electricity Board
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CPA	Central Partnership Authority
DABS	Da Afghanistan Breshna Sherkat
Eol	Expression of Interest
EMP-s	Energy Master Planning Secretariat
EPD	Energy Policy Directorate
ERA	Electricity Regulatory Authority
ESRA	Energy Supply for Rural Areas
FiT	Feed in Tariff
GoB	Government of Bangladesh
GIRoA	Government of Islamic Republic of Afghanistan
GIZ	Gesellschaft für Internationale Zusammenarbeit
GW	Giga Watt
IARCSC	Independent Administrative Reform and Civil Servant Commission
IDEA	Institutional Development for Energy in Afghanistan
IDCOL	Infrastructure Development Company Limited
IPD	Investment Promotion Desk

IPP	Independent Power Producers
ISO	International Standardization Organization
JV	Joint Venture
kW	Kilo Watt
MEW	Ministry of Energy and Water
MIGA	Multilateral Investment Guarantee
MoF	Ministry of Finance
MoEc	Ministry of Economy
MRRD	Ministry of Rural Rehabilitation and Development
MW	Mega Watt
NEPS	North East Power Systems
NOC	No Objection Certificate
O&M	Operation and Maintenance
OPIC	Overseas Private Investment Corporation
PPP	Public Private Partnership
P&R	Policy and Regulatory
PSMP	Power Sector Master Plan
RE	Renewable Energy
RECC	Rural Energy Coordination Committee,
REED	Rural Energy and Enterprise Development
RED	Renewable Energy Directorate
SEPS	South East Power System
SWOT	Strengths, Weakness, Opportunities, Threats
TWG	The Working Group
UNCITRAL	United Nations Commission for International Trade Rights Arbitration Law
USAID	U.S. Agency for International Development
USD	US Dollars
VfM	Value for Money
VAT	Value Added Tax
WAPECA	Water and Power Engineering Company of Afghanistan Directorate
ZREC	Zonal Renewable Energy Centres

## A2: Executive Summary

### 1.1 Background

Afghanistan's economy is characterised by lack of basic infrastructure facilities including power infrastructure, which is plagued by lack of resources and inadequate institutional support. In spite of large power generation potential, consisting of both Renewable Energy (RE) (about 300 GW) and conventional energy, the current domestic installed generation capacity is only about 623 MW<sup>1</sup> consisting largely of diesel and hydro. The domestic generation is sufficient to meet only 30% of the total power consumed and remaining 70% is imported from the neighbouring countries, costing Afghanistan about USD 220 Million (2016-2017)<sup>2</sup>. The present power supply (domestic generation and imported power) is sufficient to provide power to only about 35% of the households.

To improve this power scenario, the Government of Islamic Republic of Afghanistan (GIROA) is aiming to increase the electrification level in rural and urban areas to 65% and 100%, respectively, by 2032<sup>3</sup>. To meet this target, GIROA is planning to add 2300 MW by 2020<sup>4</sup> and around 5000-6000 MW by 2032. To support this, a strong institutional structure and a conducive policy environment is required, both of which are at an evolutionary phase in the country.

Further, as a result of limited availability of domestic financial resources and declining international funding support, private sector participation has become imperative for development of power sector in Afghanistan. While private investments would help the Government to gradually move away from the cycle of donor funding, it would also help the country to become self-reliant in meeting its energy needs. It is estimated that the total investment requirement for generation and transmission projects during 2017-2023 would be about USD 9,514 million of which roughly 70% is expected to come through private sector investments (USD 6,544)<sup>5</sup>.

Recognizing the role of private sector, GIROA has initiated several steps to attract private investment, the foremost being creation of a facilitative policy framework. GIROA has issued several policies with the objective of attracting private investors (domestic and foreign) in the power sector. These policies, however, require further refinement to meet the implementation challenges.

To supplement the policy framework for facilitating the entry of private players in the power sector, it is proposed to create a dedicated investment support entity that would act as a single point contact for the prospective private sector companies intending to invest in the power sector of Afghanistan, to be christened as Investment Promotion Desk (IPD) and would be housed in the MEW. For this purpose, MEW, the governing authority for Afghanistan power sector has received support from Gesellschaft für Internationale Zusammenarbeit (GIZ) to set up the IPD<sup>6</sup>.

### 1.2 Objective of the Engagement and Scope of the Report

The objective of the engagement "Support for setting up an Investment Promotion Desk (IPD) in the MEW" is to support MEW in setting up the IPD in MEW, which would act as a "Single Point of

<sup>1</sup>Source: <https://sites.google.com/site/iceafghanistan/electricity-supply/domestic-generation-1>, last accessed on 25th September 2017

<sup>2</sup>Source: <https://sites.google.com/site/iceafghanistan/electricity-import-cost>, last accessed on 25<sup>th</sup> September 2017

<sup>3</sup>Source: Afghanistan National Renewable Energy Policy, 2015

<sup>4</sup>Source: Five Year Energy Sector Development Plan (2016-2020)

<sup>5</sup>Source: Afghanistan Energy Sector Development Plan, presented by Amanullah Ghalib, Energy Deputy Minister, MEW, [https://www.ekonomi.gov.tr/portal/content/conn/UCM/uuid/dDocName:EK-236901.jsessionid=P719f\\_iFOsLE0aXq5A\\_u\\_3qDWBBRhpp9Ee6T6pEGSORQQjrfJnHl-1930188290](https://www.ekonomi.gov.tr/portal/content/conn/UCM/uuid/dDocName:EK-236901.jsessionid=P719f_iFOsLE0aXq5A_u_3qDWBBRhpp9Ee6T6pEGSORQQjrfJnHl-1930188290), last accessed on 11<sup>th</sup> November 2017

<sup>6</sup> GIZ issued Terms of Reference (ToR) for "Support for setting up an Investment Promotion Desk (IPD) in the MEW" in August 2017. The engagement was subsequently awarded to Meghraj Capital Advisors Private Limited (Consultant) post completion of the competitive bid process.



Contact” for the private power promoters to provide information and address issues faced by them in the project development processes.

The objective of this Report is to study broad policy framework for setting up power projects in Afghanistan. This Report analyses the existing policy framework governing the power sector, private sector participation and investment promotion in Afghanistan. The report assesses the effectiveness of the current policies in promoting/enabling private sector investments in the power sector.

### 1.3 Limitations of the Report

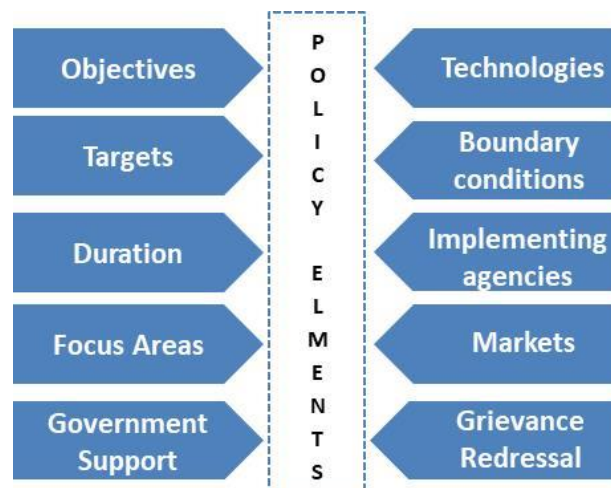
The Report captures the policy framework as it exists in the power sector in Afghanistan today. However, there are certain limitations to the study. Some Policies such as the Feed-in-Tariff Policy, 2015 (Draft) are not available in the public domain for analysis. Also, the exact mandates of the key institutions such as Ministry of Finance (MoF) and Ministry of Economy (MoEc) were not available. Hence, most of the analysis on the institutional set up is drawn from the secondary sources and require vetting from government sources.

### 1.4 Framework for Policy Analysis

**Figure 1: Essential Elements of Power Sector Policy**

In order to have a common framework for analysis of various policies, it is important to understand the key elements that constitute good policy coverage. These elements are summarized in the Figure 1 and the power sector policies of Afghanistan have been analysed on the basis of these parameters. The assessment has been made as per the framework outlined to the extent possible, as some Legislations and Policies may not necessarily have these specific components.

Further, to contextualize the policy analysis, it is important to understand the current market scenario and the institutional framework of power sector, as discussed in the next section.



### 1.5 The Current Market Scenario in the Power Sector

Da Afghanistan Breshna Sherkat (DABS), a GIRoA owned entity, is involved in all the three key functions – generation, transmission and distribution of electricity sector and has a monopoly in the Afghanistan’s power sector. At present, private players have a very little share in generation.

**Generation:** The total installed capacity in the country is 623 MW (as in March 2016) consisting of diesel (over 50%), large hydropower (40%) and renewables (about 10%). Small-scale Independent Power Producers (IPPs) are also operating in addition to the plants owned by DABS.

**Transmission:** Afghanistan’s grid consists of four isolated transmission systems viz. North East Power Systems (NEPS), South East Power System (SEPS), Herat System and Turkmenistan System.

**Distribution:** There are three main categories of consumer segments serviced by DABS: Residential (90%), Commercial (7%) and Government (3%).

**Electricity Prices:** Electricity prices vary across provinces, depending on the source of electricity. Residential consumers are cross-subsidized resulting in higher tariffs for commercial and government

connections. DABS adds 15% overheads to cover its Operations and Maintenance (O&M) costs in all the provinces, this also pushed up the electricity tariffs.

## 1.6 Institutional Framework in Power Sector

There are a number of institutions that are operating in the power sector in order to promote investments. Key institutions and their primary roles are discussed in the Table below:

**Table 1: Key Institutions of Power Sector**

Sr. No.	Institution	Key Role
1.	Ministry of Energy and Water (MEW)	MEW governs the power sector (both conventional and RE) in Afghanistan. It is the primary authority responsible for development of the sector and has principal responsibilities related to formulating laws and policies, developing strategies and preparing plans for the sector. MEW function through its Directorates and Departments having different mandates for the development of both conventional energy and RE
2.	Da Afghanistan Breshna Sherkat (DABS)	DABS is the principal entity responsible for operations of the power sector in Afghanistan. It was established with an objective to provide cost-effective, reliable, and safe electricity to consumers in order to facilitate economic growth.
3.	Ministry of Rural Rehabilitation and Development (MRRD)	MRRD is one of the key Government agencies, responsible for rural electrification and promoting rural energy services.
4.	International Funding Agencies	International financial aid has become the mainstay for the growth of Afghanistan as more than USD 100 billion has been provided since 2001. The areas of focus of the financial aid are security, infrastructure development, humanitarian activities, health, education, etc.
5.	Private Players	Private players support development of power sector through provision of capital.

As the institutional framework of Afghanistan is still evolving, the new institutions are being set up to further refine the framework and attract the private investment, as discussed below:

### 1.7.1. Investment Promotion Desk (IPD)

It is proposed to set up an IPD in the MEW with the support from GIZ under its IDEA programme. The IPD will support MEW in attracting private sector investments for the energy sector and in promoting development of RE resources for sustainable development of the power sector in Afghanistan.

The IPD is envisaged to undertake the following activities:

- Provide relevant information to the private power companies regarding policy framework and approval processes
- Assist the Deputy Minister, MEW in bid process management of private power projects
- Guide the investors in the assessment of their project proposals and follow up for timely approvals for setting up the power projects
- Address the concerns of the investors properly
- Take proactive steps to attract private sector investment of power sector in Afghanistan
- Focus on speeding up the investments on the ground through a “one stop” facilitation process

### 1.7.2. Energy Master Planning Secretariat (EMP-s)

EMP-s will be entrusted with updating Afghanistan's Power System Master Plan (PSMP) as well as preparing consolidated budgets for submission to MoF and reporting implementation progress to the MoEc.

## 1.7 Challenges and Constraints in the Institutional Set Up

As per our analysis, feedback from MEW staff and other key stakeholders following are the challenges that are limiting performance of the existing institutions in Afghanistan. These challenges need to be addressed to make these institutions more effective.

- **Capacity Constraints:** Owing to low literacy rates and lack of training infrastructure, Afghanistan has acute and chronic shortage of technical manpower across various institutions in the energy sector.
- **Lack of coordination between MEW and MRRD:** It has been observed that there is a lack of coordination between both the ministries with respect to responsibilities pertaining to implementation, operations and maintenance of the projects. This impacts on the expected service delivery as well.
- **Lack of Regulatory Independence:** The electricity regulatory body of Afghanistan is a department within MEW and is functioning under its aegis. This impacts the autonomy and independence of the regulatory body, which is an essential requirement for a well-functioning regulatory authority. MEW is also the owner of DABS, one of the entities that have to be regulated by the regulatory authority. This overlap impairs the regulatory decision making of the authority. In order to create a level-playing field for private sector players and the incumbent, the regulatory independence of the authority must be ensured.

## 1.8 Existing Policy Framework in Power Sector in Afghanistan

The policy framework for the power sector is still at an evolutionary stage in Afghanistan. Most of the policies have been framed over the last 4 to 5 years. In this section the laws, policies and regulations pertaining to power and infrastructure sector have been assessed with an objective to understand how these drive investments in the power sector.

### 1.9.1. Private Investment Law, 2005

This Law has been framed to promote both domestic and foreign private investments for the country. It covers various infrastructure sectors including power infrastructure (limited to generation and transmission). The Power Services Regulation Act refers to this Law for governing investments in the power sector in Afghanistan. The Law permits foreign person(s) to invest in Afghanistan through a "Registered Enterprise" or through reinvestment from an existing Registered Enterprise.

Among various favourable provisions to attract private investment, this Law provides for equal treatment to foreign and domestic investors, direct and indirect tax concessions, repatriation of investment and profits. However, despite the existence of this law for over a decade, private investment in power sector has not picked up, mainly because of security situation of the country, lack of properly defined processes for availing business process support and lack of clear and stable policy framework in the power sector.

### 1.9.2. Power Services Regulation Act, 2015

The power sector is governed by the Power Services Regulation Act, 2015. The main objective of the Act is to provide access to power to the citizens of Afghanistan at a fair price and on a non-discriminatory basis. The Act permits both domestic and foreign private sector to provide electricity

services having valid licenses and concluding contracts. Generation facilities below 100 KW and captive power plants are exempted from licensing requirements.

The enactment of the Power Services Regulation Act is a step in the right direction. However, the private sector investors in Afghanistan have raised its concerns on some aspects of the Act, such as the independence of the Regulator and have sought amendments. The Act also creates overlap between the Regulatory Authority and MEW/MRRD. The primary focus of this Act is licenses and does not define the basis of tariff determination. Further, the Act states that a legal entity will be disqualified if any of its shareholders/ members of Executive Board/ Board of Directors have lost their legal capacity. The conditions for re-eligibility are not specified, thus, becomes counter intuitive to the business as the Company cannot be held responsible for the actions taken by the shareholders in their personal capacities.

#### **1.9.3. Private Sector Investment Policy, 2016 (Draft)**

The primary objective of this Policy is to facilitate private investment in the power sector. The Policy has various provisions to safeguard the interests of the private sector, such as investment protection through insurance services, dispute resolution mechanism, and simplification of administrative procedures through online system for processing documents.

However, this Policy does not provide any details regarding financial incentives to be offered to private sector, which are important to attract private sector investments. Also the online system for processing documents is not well defined in terms of what documentation (approvals, clearances) will be processed online, the time frame for processing applications etc.

#### **1.9.4. Public Private Partnership Law, 2016**

The PPP Law, 2016 has been framed to provide a statutory framework for PPPs in Afghanistan. It permits PPP only in power generation only. The Law also defines two modes of procurement under PPP arrangement, (a) Solicited projects (open bidding, direct procurement or competitive dialogue), (b) Unsolicited projects (The project developer can submit an unsolicited proposal to MEW for consideration).

The Law acknowledges ten types of PPP models and provides for financing through viability gap funding and project development fund. However, the Law does not have clear provisions on risks and does not provide for capacity building measurements.

#### **1.9.5. National Public Private Partnership Policy, 2017**

This Policy aims to improve public infrastructure provision and service delivery through effective utilization of private sector investments and business expertise. It aims to provide financial and non-financial incentives to the private sector and describes the steps of implementing a PPP project. The Policy also calls for preparing standard PPP Guidelines on the lines of relevant international experience and aims to ensure complete transparency in information flow to investors.

However, the provisions for monitoring and evaluation of PPPs are not elaborated in the Policy. Further, some principles for formulating a PPP project such as "Value for Money (VfM)" require further clarity and support data.

#### **1.9.6. Afghanistan National Renewable Energy Policy (ANREP), 2015**

The Policy is applicable for the period 2015-2032 and aims to deploy RE that would constitute 95% of total energy mix of 5000-6000 MW in 2032. The Policy aims to provide fiscal and non-fiscal incentives to private sector investors and equipment manufacturers/ suppliers. It also aims to increase competitiveness of RE technologies and nurture the local industry and encourages private players such as IPPs to develop and manage RE projects on Build-Own-Operate (BOO) basis. MEW is the

national nodal agency under this Policy for strategizing, planning, coordination and implementation of the policy.

The Policy also provides for licensing of RE projects, financial incentives (interest subsidies and soft loans, customs duty and sales tax exemption, income tax exemption, etc.) and other incentives such as “must-run status” to RE projects and provisions facilitating wheeling and banking through national grid. ANREP also defines the basis of tariff determination for grid-connected, distributed generation, hybrid projects and off-grid standalone projects.

However, the Policy does not define sector or technology wise targets. The Policy has also not clearly defined the business models for the private sector or the procurement processes. There is not much clarity on the quantum of subsidies, time-frame for giving the subsidies, etc. Business support in terms of getting approvals and clearances, to be provided to private sector by MEW and other institutions is also not clearly defined. The Policy aims to increase private participation but it does not delineate how it proposes to achieve the same and what are the timeframes for doing so.

### 1.9.7. Afghanistan Rural Renewable Energy Policy, 2013

This Policy is also directed towards the deployment of renewables, however, differs from ANREP in the sense that its scope is limited to rural areas only. One of the guiding principles of the Policy is to facilitate private sector participation as rural energy service providers, including equipment dealers and cooperatives. The Policy defines the regulatory measures to be taken including developing pricing and tariff structures, establishing procedures and charges to evacuate power from the point of generation, developing PPA between energy providers and utilities and developing grid codes.

The Policy covers wind, solar, biomass, geo-thermal and hydro resources; however the technologies have no specific targets. It aims to deploy affordable means of finance considering the low incomes of the rural population and to promote business models that allow for both consumptive and productive uses of RE and provides similar incentives as provided by ANREP along with additional subsidies for small hydro plants up to 1 MW capacity.

## 1.9 Policy Framework Matrix

Based on the analysis, a summary table of the Policies on the parameters assessment is provided below:

**Table 2: Summary of Policies**

Components	Private Investment Law, 2005	Power Services Regulation Act, 2015	PPP Law, 2016	ANREP, 2015	Rural Renewable Energy Policy, 2013	Investment Policy (Draft)	PPP Policy, 2017
Objectives	✓	✓	✓	✓	✓	✓	✓
Targets	x	x	x	✓	x	x	x
Duration	x	x	x	✓	✓	x	x
Focus areas	x	x	x	x	x	x	x
Boundary conditions	✓	x	✓	✓	x	x	✓
Government Support (Incentives)	✓	✓	✓	✓	✓	✓	x
Technologies	x	x	✓	✓	✓	x	x
Markets	x	x	x	✓	✓	x	x
Implementing agencies	x	✓	✓	✓	✓	x	✓

Components	Private Investment Law, 2005	Power Services Regulation Act, 2015	PPP Law, 2016	ANREP, 2015	Rural Renewable Energy Policy, 2013	Investment Policy (Draft)	PPP Policy, 2017
Grievance Redressal	x	✓	✓	x	x	✓	x

### 1.10 Conclusion

Afghanistan has initiated several steps to create an environment conducive for private investment in the power sector. This includes formation of new institutions such as IPD and issuance of new legislations and policies. While there are some obvious limitations in the policies, (discussed in detail in Section 7 of the report), it needs to be acknowledged that the GIRoA has embarked on the right path. Efforts need to be made to ensure that the investments in the sector grow moving forward and the requisite policy support is provided. The main limitations which have emerged from the policy analysis are as follows. These need to be addressed to ensure the investments.

- **Independence of the regulator:** The MEW's Energy Regulatory Authority Department is the Regulatory Authority for the power sector. However, this department being under the MEW is not independent and is susceptible to the influence of MEW in important decisions such as tariff setting, award of licenses etc. To perform its functions as per the mandate vested to it under the Power Services Regulation Act, 2015, it is necessary that it has an arms-length relation with MEW and is set up as an independent entity.
- **Lack of clarity on tariff setting process:** There is no clarity on the tariff setting process adopted by DABS as well as there are no Guidelines/Regulations defining the standard methodology for setting tariffs for electricity and technology wise renewable Feed in Tariffs (FiTs). This impacts the expected revenue flow and return of the investor and thus the attractiveness of the investment.
- **Lack of clarity on fiscal and financial incentives:** Policies including ANREP and Investment Policy do not provide sufficient details on the quantum of incentives to be given to private sector. The Guidelines for policy implementation detailing out the procedure to avail incentives, quantum of incentives, proposal submission formats etc. have not yet been brought out which will provide the much needed clarity on the aspects highlighted above.

However, by initiating the first steps towards a facilitative policy framework, the government is trying to create the necessary environment for bringing private investment. GIRoA aims to move towards a market structure where the growth is led by private sector. This is being planned in a phased manner by first allowing competition in generation (allowing privately owned generators to sell electricity to the grid) and then gradually introducing private participation in distribution (in areas that are not served by DABS grid).

Efforts are already underway to bring IPPs in the generation segment in both conventional and RE as highlighted in Section 5. Procurement process has begun for several projects. As highlighted in ANREP, high impact opportunities (large scale grid connected projects, followed by mini-grids and solar PV rooftops etc.) should be leveraged first.

At the same time, there is also a need to set targets realistically. It is recognized that in the immediate term grid may not reach all the provincial capitals, given the low access levels at present. Therefore, there is a need to focus on distributed and standalone RE. Here, the private sector can play an important role in setting up infrastructure and serving such areas. MEW along with MRRD and DABS can delineate the areas, which will not be served in the near to medium term and award contracts to private developers based on a transparent bidding process.

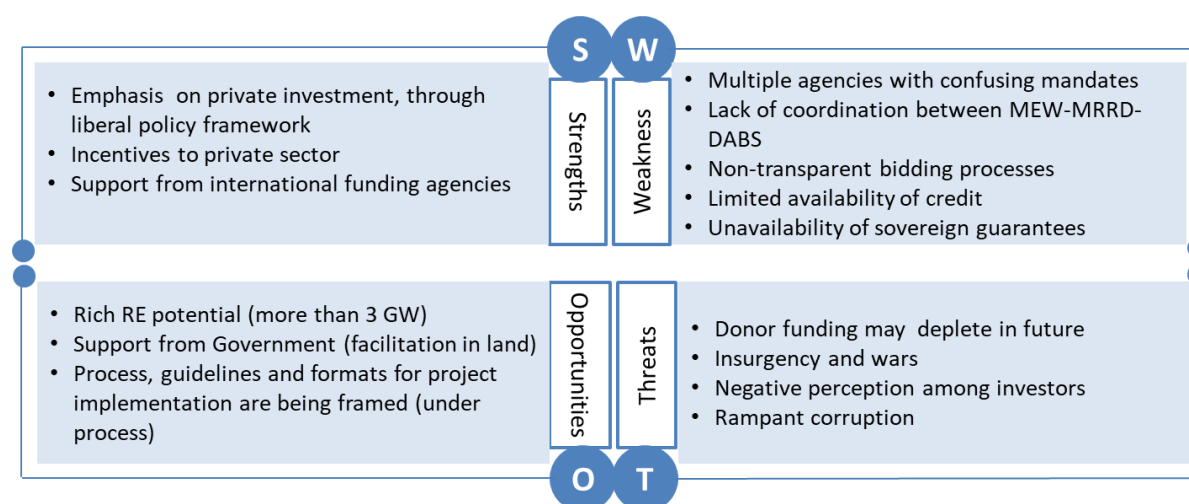


The success of policies in bringing private investment would hinge on the actual implementation on the ground. This in turn will depend on coordination between: a) various line ministries b) MEW/MRRRD and various institutions at provincial and local level as several planning processes such as site identification, selection and management of O&M contractors happen at the local level. The success will also depend on transparency in the bidding process, support provided by GIRoA in timely approvals and clearances, clear identification and allocation of risks between project developers and GIRoA (in case of PPP).

At present, there are several challenges affecting the power sector in addition to the shortcomings in the policies outlined earlier. Foremost, being the threat to physical assets owing to security reasons. Other challenges include non-transparent project allocation in power sector<sup>7</sup>, lack of reputable companies with experience in insuring RE power projects, capacity constraints in various institutions which in turn delay the implementation of projects. This is reflected in the SWOT analysis given below.

Despite these challenges, given the right facilitation and support to private sector, investment can be mobilized in power sector. This is the primary objective with which the IPD has been set up. The following section provides clarity whether the extant policy framework has a provision for an agency like the IPD.

**Figure 2: SWOT Analysis of Afghanistan Power Sector**



### 1.11 Role of IPD in the Current Policy Framework

The existing policy framework, does not mention a body explicitly required to be set up to facilitate investments. The PPP policy calls for MEW to establish its own PPP unit to frame the procurement rules and guidelines for power sector.

Following are our suggestions for ensuring smooth and effective functioning of the IPD. The suggestions below have been framed from the analysis of the Policy framework and interactions with MEW.

- **IPD to function as the PPP unit under MEW:** In accordance with the provisions of the PPP policy, it is suggested that IPD also functions as the PPP unit of MEW by defining the guidelines for PPP in power sector, overall program management, monitoring and evaluation procedures etc.

<sup>7</sup> As per discussions held with MEW

This will enable to streamline the operations in MEW and also eliminate the creation of additional institution.

- **Coordination with Ministries:** Given the role IPD is expected to play, it will be necessary for IPD to interact with Ministry of Commerce and Industries and MRRD on regular basis. The former provides business licenses to private sector while the latter is responsible for implementation of energy projects in the rural areas. It is suggested that IPD coordinates with these two ministries by establishing a formal process for regular communication and coordination. It is suggested that two officials are designated from each of these ministries as the point of contact for coordination and communication with the IPD.
- **Creation of in-house data bank:** IPD should have a data bank with details of projects, application formats, bid documents, proposal guidelines, feasibility studies, resource maps etc. to be able to guide the project developers and function effectively.

The above mentioned measures may be considered by GIRoA while setting up the IPD in the MEW.



## A3: Project Background

### 3.1 Setting the Context

#### 3.1.1. Overview

Afghanistan's economy is characterised by lack of basic infrastructure facilities. Development of power infrastructure, which is the mainstay for economic development, is plagued by lack of resources and inadequate institutional support. As a result, availability of reliable and affordable power is limited even in the urban areas including the capital city of Kabul.

While decades of war took a heavy toll on its development, the fragile political situation has not been conducive for the advancement and maturing of the governance systems in the country. Thus, the institutional wherewithal is abysmally slow in responding to the dynamic needs of development, particularly in the power sector.

The Ministry of Energy and Water (MEW) has the primary responsibility for policy making, planning and development of power sector in Afghanistan. Government has recognised the need for rapid development of power sector for the economic well-being of the country and development of power policies in the country is in an evolutionary phase.

Though the existing power generation capacity in the country is low, it has large energy resources of both fossil fuels and Renewable Energy (RE). It is estimated that the RE potential in the country is over 300 GW as indicated in Table 1

**Table 3: RE Potential of Afghanistan**

Sr. No.	RE Source	Estimated Potential (MW)
1	Solar	222,849
2	Wind	66,726
3	Hydro	23,310
4	Biomass	4,000
	Total	3,16,885

Further, it is estimated that the country has significant potential for geo-thermal energy. However, in the absence of a proper resource estimation exercise, official figures are not available. In addition to the RE resources, a cumulative potential of 3000-4000 MW of coal and gas based power generation exists in the country<sup>8</sup>. Much of the potential, however, remains untapped at present. Afghanistan has only about 623 MW<sup>9</sup> of domestic installed generation capacity that largely consists of diesel

and hydro. The domestic installed capacity meets only about 30% of the consumption needs and the remaining 70% is met by power imports from the neighbouring countries viz. Uzbekistan, Tajikistan, Turkmenistan and Iran. Energy imports cause severe financial strain on country's economy, costing about USD 220 Million (2016-2017)<sup>10</sup>.

Notably, the present power supply (domestic generation and imported) is sufficient to provide power to only about 35% households, consisting of 90% urban and only 10% rural households. The Government aims to increase the electrification level in the rural areas to 65% and to 100% in the urban areas by 2032<sup>11</sup>. Energy access is indeed a formidable challenge in the country, given that about 75% population resides in the rural areas.

<sup>8</sup>Source: Presentation on Investment Opportunities in Energy Sector in Afghanistan, Quadratulh Delawari, CEO, DABS, dated 24 October 2016, <http://www.carecprogram.org/uploads/events/2016/19-Energy-Investment-Forum/Presentations/2016-EIF-Presentation-Session1-AFG.pdf>, last accessed on 10<sup>th</sup> November 2017

<sup>9</sup>Source: <https://sites.google.com/site/iceafghanistan/electricity-supply/domestic-generation-1>, last accessed on 25<sup>th</sup> September 2017

<sup>10</sup> Source: <https://sites.google.com/site/iceafghanistan/electricity-import-cost>, last accessed on 25<sup>th</sup> September 2017

<sup>11</sup> Source: Afghanistan National Renewable Energy Policy, 2015

In the light of the aforementioned challenges confronting the power sector, the Government has resolved to bring about all round development of the sector with special emphasis on building domestic power generation capacity, as a measure to achieve long term energy security. The Government plans to add 2300 MW by 2020<sup>12</sup> and around 5000-6000 MW by 2032. Due to lack of availability of domestic financial resources and declining international funding support, participation of private sector has become imperative for the development of power sector in Afghanistan. While private investments would help the Government to gradually move away from the cycle of donor funding, it would also help the country to become self-reliant in meeting its energy needs. It is estimated that the total investment requirement for generation and transmission projects during 2017-2023 would be about USD 9,514 million of which roughly 70% is expected to come through private sector investments (USD 6,544)<sup>13</sup>.

Recognizing this, the Government of Islamic Republic of Afghanistan (GIRoA) has initiated several steps to attract private investment, the foremost being creation of a facilitative policy framework. GIRoA has issued several policies with the objective of attracting private investors (domestic and foreign) in the power sector. These policies, however, require further refinement to meet the implementation challenges. While most of the Legislations and Policies have come into existence during the last 4-5 years, some of these, such as the Private Investment Law 2005 have been in existence for over a decade. Despite the existence of this law, private investments in power sector have not taken off due to several factors, which are discussed in the subsequent sections of the report.

To supplement the policy framework for facilitating the entry of private players in the power sector, it is proposed to create a dedicated investment support entity that would act as a single point contact for the prospective private sector companies intending to invest in the power sector of Afghanistan. This entity would be christened as Investment Promotion Desk (IPD) and would be housed in the MEW. It would meet all information needs of the private sector companies and would provide clarity on various aspects of project development including approval and clearance processes, coordination with different stakeholders, bid process management, applicable policy provisions, incentives etc. For this purpose, MEW, the governing authority for Afghanistan power sector has received support from Gesellschaft

### **GIZ support in Afghanistan**

Afghanistan is a priority country for GIZ and it has been actively working in Afghanistan since 2002; GIZ is supporting the GIRoA in a number of areas such as education, energy, development-oriented emergency and transitional aid, health, good governance, water, and economic development.

### **The IDEA Programme of GIZ**

The Institutional Development for Energy in Afghanistan (IDEA) programme of GIZ supports GIRoA in various areas including advisory support for creating an enabling legal, policy and regulatory framework for swift development of the energy sector in Afghanistan. Key components of the programme include institutional strengthening, training, institutional coordination at National and Provincial levels, good governance, enhancing stakeholder awareness and information dissemination to consumers etc.

IDEA is also supporting the MEW in attracting private sector investments in the energy sector by setting up an Investment Promotion Desk (IPD) in the MEW.

<sup>12</sup> Source: Five Year Energy Sector Development Plan (2016-2020)

<sup>13</sup> Source: Afghanistan Energy Sector Development Plan, presented by Amanullah Ghalib, Energy Deputy Minister, MEW, [https://www.ekonomi.gov.tr/portal/content/conn/UCM/uuid/dDocName:EK-236901;jsessionid=P719f\\_iFOsLE0aXq5A\\_u\\_3qDWBBRhpp9Ee6T6pEGSORQQjrfJnHl-1930188290](https://www.ekonomi.gov.tr/portal/content/conn/UCM/uuid/dDocName:EK-236901;jsessionid=P719f_iFOsLE0aXq5A_u_3qDWBBRhpp9Ee6T6pEGSORQQjrfJnHl-1930188290), last accessed on 11<sup>th</sup> November 2017

für Internationale Zusammenarbeit (GIZ) to set up the Investment Promotion Desk (IPD)<sup>14</sup>, as discussed in the next section.

### 3.2 Objective of Setting Up the IPD in the MEW

The objective of setting up the IPD in the MEW is to establish a “Single Point of Contact” for the private investors to meet all the information needs and address issues faced by them in the project development processes.

It is envisaged that IPD would provide necessary comfort and confidence along with handholding support to the prospective private investors, who wish to develop power projects in Afghanistan. The creation of IPD would support MEW in attaining following objectives:

- Provide relevant information to the private power companies regarding policy framework and approval processes.
- Assist the Deputy Minister, MEW in bid process management of private power projects.
- Guide the investors in assessment of their project proposals and follow up for timely approvals for setting up the power projects.
- Address the concerns of the investors.
- Take proactive steps to attract private sector investment in power sector in Afghanistan.
- Enable speeding up of investments on the ground through a “one stop” facilitation process.

### 3.3 Scope of Engagement

The scope of work for the project is summarized below:

#### 1. Design and Establishment of IPD

- Study broad policy framework for setting up power projects in Afghanistan.
- Identify and finalize key tasks/activities of the IPD in consultation with the Deputy Minister, MEW.
- Design an appropriate organization structure for the IPD.
- Prepare job descriptions for each position of the Investment Promotion Desk and assist the Deputy Minister in filling these positions with appropriate staff.
- Prepare various information material in the form of brochures/flyers/pamphlets and other related information documents for the private power companies.
- Prepare comprehensive Guidelines for private investments in the Afghanistan power sector.
- Coordinate with related Ministries/Agencies to identify approval processes and document the same.

#### 2. Operationalization and Hand Holding of IPD

- Operationalize the IPD.
- Oversee the functioning of the Desk and assist in resolving all prospective issues that may arise.
- Advise MEW in preparing all relevant analysis/notes/proposals for project negotiations and approvals.
- Bid Process Management for the award of power projects to private power companies.
- Assist MEW in drafting/negotiating various project agreements, such as Land Lease Agreements, Power Purchase Agreements, International Competitive Bidding Framework, etc.

#### 3. Capacity Building of IPD Staff

- Capacity building of the IPD staff in the following areas
  - Public policy formulation, particularly for the private sector.
  - Project appraisal.
  - Preparation of information brochures/documents.
  - Bid process management.
  - Tariff analysis.
  - PPA negotiations.

<sup>14</sup> GIZ issued Terms of Reference (ToR) for “Support for setting up an Investment Promotion Desk (IPD) in the MEW” in August 2017. The engagement was subsequently awarded to Meghraj Capital Advisors Private Limited (Consultant) post completion of the competitive bid process.

### 3.4 Objective of this Report

The objective of this report is to cover the following sub-component of Component 1 of the Scope of Engagement (discussed in the previous Chapter):

<b>Design and Establishment of IPD</b>	Study broad policy framework for setting up power projects in Afghanistan
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This report analyses the existing policy framework governing the power sector as well as private sector participation in Afghanistan. The report will assess the effectiveness of the current policies in promoting/enabling private sector investments in the power sector. This is the second deliverable under the “Support for setting up an Investment Promotion Desk (IPD) in the MEW” project of GIZ.

This report can be taken as a reference document by the IPD staff for their internal capacity building to understand the existing policy framework. This document will enable the IPD to play an effective role in providing precise and accurate guidance to the private players on various policy provisions and overview of the energy landscape in Afghanistan.

This report takes forward the issues discussed in the inception report (first deliverable under the project) such as the risks faced by the investors and evaluates whether these risks are addressed by the current Policy and Regulatory (P&R) framework and which remain unaddressed.

### 3.5 Organization of the Report

This report consists of ten major sections that include abbreviations, Executive Summary and project background; discussed earlier.

- **Section 3** provides a brief introduction to the project and the objective of setting up an IPD.
- **Section 4** highlights the role that policies play in encouraging private sector participation including the key constituents of a power sector policy.
- **Section 5** describes the status of the current market in the power sector in Afghanistan.
- **Section 6** details out the institutional framework in the power sector and key challenges in the institutional set up.
- **Section 7** provides the policy framework of the power sector in Afghanistan including a detailed analysis of each policy.
- **Section 8** pertains to the international experiences and analyses the power sector policies of Bangladesh and Sri Lanka.
- **Section 9** is the concluding section that also entails a Strengths, Weakness, Opportunities, Threats (SWOT) analysis of the power sector in Afghanistan. It also suggests the role IPD can play in promoting investments in the power sector based on the analysis of the current national policies and the international experiences of the same.

### 3.6 Limitations of the Report

The Report captures the policy framework as it exists in the power sector in Afghanistan today. However, there are certain limitations to the study, which are as follows:

- **Non-availability of certain Policies:** Some Policies such as the Feed-in-Tariff Policy, 2015 (Draft) are not available in the public domain or from MEW and they will be added in the report as and when they become available.
- **Non-availability of exact mandates of key institutions:** The exact mandates of the key institutions such as Ministry of Finance (MoF) and Ministry of Economy (MoEc) were not available. Most of the analysis on the institutional set up is drawn from the description of the mandates available from the secondary sources.

#### A4: Role of Policy Framework in Facilitating Private Sector Participation

An ideal Policy Framework creates suitable investment climate in a country/sector by setting down the rules for conducting business; and providing stability and support to the business eco-system. The framework aims at correcting market failures in a manner that leverages a country's strengths in creating a conducive investment environment. It should allow firms/enterprises to invest productively and profitably and in a manner that does not impose additional costs on them, thus facilitating highest possible economic and social impact<sup>15</sup>. This will determine the quality of investment, whether small, large, domestic or foreign.

In other words, the Policy framework facilitates the following:

- Providing clarity about the vision of the Government.
- Setting the rules for conducting business in a sector.
- Addressing/ mitigating risks to investors.
- Contributing to a healthy investment climate.
- Channelizing investment where it is needed.

#### 4.1 Components of Power Sector Policy

This section discusses the key components of a policy that ensures that it is a holistic document promoting sector development. The essential elements of a Policy include:

Elements	Explanation
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• What is the vision of the Government?</li> <li>• What are the main objectives of the Policy? (e.g. increasing access, increasing generation capacity, power sector reforms, promoting private participation).</li> </ul>
<b>Targets</b>	<ul style="list-style-type: none"> <li>• Are the targets specified in Policy?</li> <li>• Are the targets SMART (Specific, Measurable, Attainable, Realistic and Time bound)?</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• What is the duration of the Policy? Is it divided into Phases, if so, why?</li> <li>• In case policies have a phased approach, then the targets also need to be aligned accordingly</li> </ul>
<b>Focus areas</b>	<ul style="list-style-type: none"> <li>• Which regions/zones are targeted for development?</li> <li>• Where will the investment flow?</li> </ul>
<b>Technologies</b>	<ul style="list-style-type: none"> <li>• Is the policy technology agnostic?</li> <li>• Which technologies are promoted?</li> </ul>
<b>Boundary conditions</b>	<ul style="list-style-type: none"> <li>• Which technologies are excluded?</li> <li>• Are there any sunset clauses on any of the provisions of the policy?</li> </ul>
<b>Implementing agencies/Stakeholders</b>	<ul style="list-style-type: none"> <li>• Who will be the implementing agencies and what will be their role?</li> <li>• How will the implementing agency interact with other participants in the sector and outside?</li> </ul>
<b>Markets</b>	<ul style="list-style-type: none"> <li>• Who are the players allowed to operate in the market?</li> <li>• What are the business models that can be implemented?</li> <li>• Is tariff structure/basis for determining tariffs defined?</li> <li>• How the contracts need to be structured?</li> </ul>
<b>Risks</b>	<ul style="list-style-type: none"> <li>• What are the risks that the Policies address?</li> </ul>
<b>Government support</b>	<ul style="list-style-type: none"> <li>• Fiscal and financial support: What are the fiscal and financial</li> </ul>

<sup>15</sup> OECD Policy Framework for Investment , 2015 Edition

Elements	Explanation
	<p>support provided? (Waivers, exemptions in duties, tax holidays, capital subsidies, interest subsidies etc.)</p> <ul style="list-style-type: none"> <li>• Technical Support: What is the technical support provided? (e.g. assistance in resource assessment, web based tools, toolkits for resource mapping etc.)</li> <li>• Business Process Support: What assistance is provided to investors/ project developers in obtaining clearances, and approvals, NOCs etc.? (Waivers, deemed clearances, time-bound clearances etc.)</li> <li>• Capacity building support: What training and capacity building support is provided to investors/project developers?</li> <li>• International cooperation: Steps taken by government to facilitate investment linkages between foreign affiliates and local enterprises?</li> <li>• How can participants access the government support?</li> <li>• Till when is the support valid?</li> </ul>
<b>Grievance redressal</b>	<ul style="list-style-type: none"> <li>• Under what conditions can the market participants utilize the grievance redressal mechanism?</li> <li>• What is the mechanism for dispute resolution and grievance redressal?</li> </ul>

**Figure 3: Essential Elements of Power Sector Policy**

The parameters summarized in Figure 1 are the parameters on which the power sector policies of Afghanistan have been analysed in the report. The assessment has been made as per the framework outlined above to the extent possible, as some Legislations and Policies may not necessarily have these specific components.

To contextualize the policy analysis, it is important to understand the current power market scenario in Afghanistan as well as the institutional framework within which the power sector operates. The next section provides a snapshot of the current market

scenario in Afghanistan and the section following that explores the institutional framework.



## A5: The Current Market Scenario in the Power Sector

The power sector in Afghanistan is functioning in a monopoly market with Da Afghanistan Breshna Sherkat (DABS) involved in all the three key functions – generation, transmission and distribution of electricity. The role of private sector is presently limited to executing the work of government owned infrastructure under a contract.

### 5.1.1 Generation

The total installed capacity in the country is 623 MW (as of March 2016). Over 50% of the capacity is dominated by thermal generation (diesel), followed by large hydropower (40%) and rest is constituted by renewables. The renewable capacity is dominated by micro hydro power plants which form over 96% of the total RE based capacity<sup>16</sup>. In addition to the plants owned by DABS, there are some small scale Independent Power Producers (IPPs) that operate in different parts of the country. However these IPPs are not registered and not much information is available about their prices etc. Further, efforts are being made to increase private investment through both IPPs and Joint Ventures (JV). For instance, there are a few RE projects involving private sector participation which are in different stages of the project lifecycle:

**Table 4: Private Sector Projects in Afghanistan**

Sr. No	Name of the project	Capacity	Status	Description
1.	Kandahar solar plant	10 MW	Awarded	(See Box)
2.	Kandahar solar plants	30 MW	Under procurement	This is the second solar PV project to be implemented in Kandahar. Until now two companies have applied for 15 MW of this tender – one for 5 MW and the other for 10 MW. DABS is presently negotiating the tariffs of these two projects with the companies <sup>17</sup> .
3.	Solar wind hybrid project in Herat province	2 MW	Awarded	This project has been awarded to a JV between two private developers viz. Quattro Construction Kabul, and Ecosys Lebanon. The plant is a combination of 1.7 MW of solar and 300 kW of wind <sup>18</sup> .
4.	Solar diesel project in Farah province	12 MW	Under procurement	-
5.	100 MW RE package	100 MW	Under procurement	These projects will be implemented in various provinces. 30 projects are being planned in 20 provinces. The 30 MW Kandahar solar plant mentioned at Sr. No. 2 above is part of this.

<sup>16</sup> <https://sites.google.com/site/iceafghanistan/renewable-energy-summary>, last accessed on 15<sup>th</sup> November 2017

<sup>17</sup> Enabling PV Afghanistan, August 2017, GIZ

<sup>18</sup> <https://sites.google.com/site/iceafghanistan/electricity-supply/domestic-generation-1/generation---recently-completed>, last accessed on 15<sup>th</sup> November 2017

### 5.1.2 Transmission

Afghanistan does not have a single national grid. It consists of four (4) isolated systems viz. North East Power Systems (NEPS), South East Power System (SEPS), Herat System and Turkmenistan System.

### 5.1.3 Distribution

There are three main categories of consumer segments serviced by DABS: Residential, Commercial and Government. Majority of the registered connections of DABS are residential (90%). The consumption mix also indicates that the highest share is of domestic consumers and only 7% of the share is constituted by the industrial sector as there is very little industrialization and low commercial activity in the country<sup>17</sup>. However, this sector has witnessed a 6% increase as compared to the previous year, indicating some growth during the past year. Electricity prices vary across provinces, depending on the source of electricity and the province in which the electricity is sold. Commercial and Government consumers pay higher tariff compared to the residential consumers, who are subsidized. DABS adds 15% overheads to cover its Operations and Maintenance (O&M) costs in all the provinces.

#### 10 MW solar plant, Kandahar

**Implementing agency:** This project is being supported by United States Agency for International Development (USAID). Project has been awarded to an Indian IPP viz. Dynasty Oil & Gas Private Ltd.

**Project selection procedure:** The project was auctioned through the reverse auction mechanism where bids were solicited from developers based on a benchmark price established by DABS. The lowest bidder was awarded the contract. The total project cost is USD 19 Million of which USD 10 Million is being provided as support by USAID. The project is expected to commence operations in August 2018.

**Tariff:** The developer has signed a 15 year PPA at a tariff of USD0.073/kWh

**Land:** The plant is located in an industrial park which lacks electricity.



Source: <https://www.pv-magazine.com/2017/09/25/afghan-utility-dabs-to-buy-solar-power-from-10-mw-facility-at-0-073-per-kwh/> last accessed on 16th November 2017

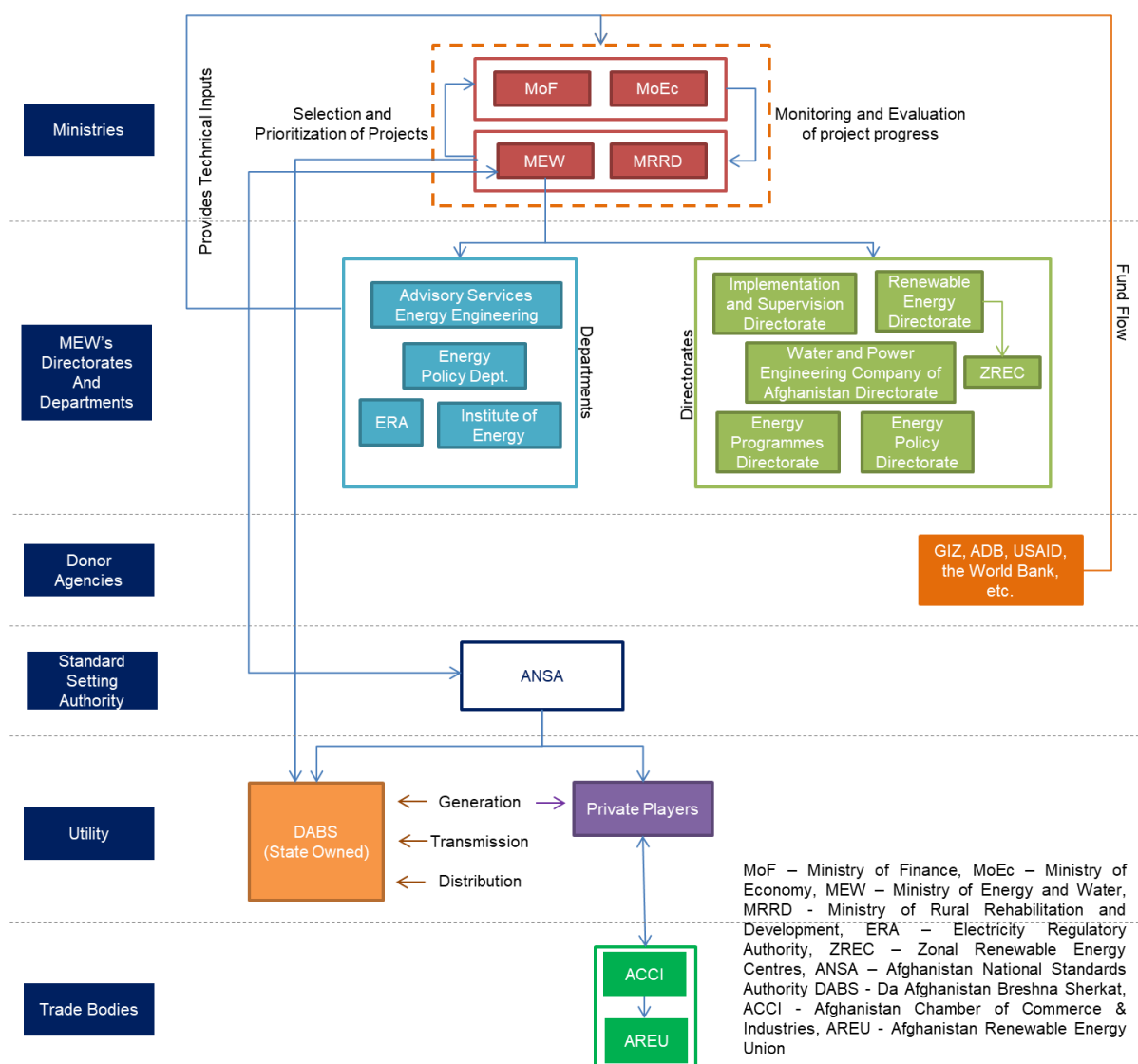


## A6: Institutional Framework in Power Sector

There are multiple institutions in Afghanistan who are actively working for the development of the energy sector. The primary government bodies with the mandate of supporting energy sector are Ministry of Energy and Water (MEW) and Ministry of Rural Rehabilitation and Development (MRRD). The following section provides a brief overview of the roles and responsibilities of these two entities and others that form the institutional structure of the power sector in Afghanistan.

### 6.1 Current Institutional Framework for Energy Sector in Afghanistan

**Figure 4: Institutional Framework for Energy Sector in Afghanistan**



The key ministry managing the energy sector is MEW and is supported by other institutions, as shown in the Figure above. Each of these institutions, including MEW, and the role they play are discussed in the next section.

#### 6.1.1 Ministry of Finance (MoF)

The primary mandate of MoF is to develop, manage and execute the national budget, collect taxes, organize and control public expenditures, process payments to the Government and manage Customs. Since the major portion of the budget is funded through donor funds, the MoF tries to

ensure that funds are channelized through the Government treasury<sup>19</sup>. The MoF is responsible for selection and prioritization of projects, including energy projects. Different ministries are required to send their budget requisition to MoF, based on which allocations are done by MoF. Further, MoF along with the development partners select the projects for funding<sup>20</sup>. As per the interactions with MEW, the coordination between MoF and MEW is fairly smooth and well-coordinated.

### **6.1.2 Ministry of Economy (MoEc)**

With respect to energy sector, MoEc has a strategic role rather than an active role. Its role is to review the list of proposed projects submitted by the electricity line ministries before every fiscal year. The ministries are also required to send their project progress reports to MoEc for monitoring purpose<sup>21</sup>.

### **6.1.3 Ministry of Energy and Water (MEW)**

MEW governs the power sector (both conventional as well as RE) in Afghanistan. It is the primary authority responsible for development of the sector and has the principal responsibilities related to formulating laws and policies, developing strategies and preparing plans for the sector. The Afghanistan National Renewable Energy Policy (ANREP) has been designated by MEW as the nodal agency for development of RE sector. Broadly, MEW is responsible for the following activities<sup>22</sup>:

- Provide estimates on the overall natural resources available for energy production e.g. coal, gas, oil, hydro, solar, wind, biomass, geothermal etc. in collaboration with Ministry of Mines and Petroleum (MoMP).
- Implement the projects with a capacity of 1000 KW (1 MW) or more along with utilities including private utilities and DABS.
- Prepare feasibility studies of hydro power plants.
- Conduct survey and design of generation, transmission and distribution projects.
- Update Power Sector Master Plan (PSMP), which is the base document for power sector planning in Afghanistan. It identifies the priorities, timeframe and costs associated with power sector development goals of the GIRoA.

Other than the above mentioned functions, MEW has also created several departments and directorates that have their own mandates, as discussed below<sup>23</sup>:

#### **6.1.3.1 Energy Regulatory Authority**

Presently, there is no separate Energy Regulatory Authority in Afghanistan. MEW also undertakes regulatory functions through its Energy Services Regulation Department also known as Energy Regulatory Authority. The most important regulatory functions vested on the Regulatory Authority by the Power Services Regulation Act, 2015 are as follows<sup>24</sup>:

- Provide recommendations to the GIRoA regarding approval of electricity tariffs.
- Facilitate investment for the power sector.
- Facilitate licensing related matters such as registration, issuance, renewal, suspension, and revocation of licenses to operate in the energy sector in Afghanistan.

<sup>19</sup> Source: <http://mof.gov.af/en/page/476/401>, last accessed on 25<sup>th</sup> October, 2017

<sup>20</sup> Source: An Institutional Analysis of Power Sector in Afghanistan – Barriers to Achieving Universal Access to Electricity, Mohsin Amin, 2017

<sup>21</sup> Source: An Institutional Analysis of Power Sector in Afghanistan – Barriers to Achieving Universal Access to Electricity, Mohsin Amin, 2017

<sup>22</sup> This section has been prepared using available literature.

<sup>23</sup> Roles and responsibilities of only two of the total five departments is available on MEW's website and the same have been discussed.

<sup>24</sup> Guidelines of Private Investment in Afghanistan

### **6.1.3.2 Implementation and Supervision Directorate for Energy Development Projects**

Earlier known as the General Directorate of Plan, this Directorate consists of five units (Energy Plan, Irrigation Plan, Economic Analysis, Statistic and Budget) has undergone restructuring on several occasions. Now known as the Implementation and Supervision Directorate for Energy Development Projects, the Directorate consists of three units (Supervision Unit, Coordination Unit, and Reporting Unit). Its objective is to provide sustainable and efficient power for public institutions and citizens across the country. Its roles and responsibilities are:

- Supervision, quality assurance and quality control of the projects
- Actively identify the possible conflicts among stakeholders and assist in resolving them
- Evaluate progress of the projects and prepare the reports for ministries and other related stakeholders.
- Prepare annual budgets and work plans
- Supervise activities of project implementing companies
- Arranges funds for projects by meeting regularly with donors and international development agencies

### **6.1.3.3 Renewable Energy Directorate (RED)**

With an objective of promoting and developing the use of RE in Afghanistan, following are the roles and responsibilities of this directorate:

- Develop a national strategy for RE in line with the National Energy Policy of Afghanistan
- Provide technical inputs to MoF for designing fiscal incentives, with a focus on attracting private sector investment
- Prepare and maintain national database of potential RE resources in Afghanistan
- Prepare RE master plans at province level
- Identify and prioritize opportunities for RE systems to facilitate energy access target
- Support surveys and feasibility studies on RE projects as well as provide support in preparing proposals to arrange funds for RE projects
- Develop technical designs, benchmarks, and performance standards
- Coordinate with donors and other funding agencies to ensure synergy of projects
- Assist MRRD, DABS, and other relevant Government organizations designing and implementation of their RE projects
- Undertake technical training, awareness generation, and capacity building activities for stakeholders
- Provide technical assistance to various organizations for effective implementation of RE projects
- Provide relevant information related to RE projects to all the stakeholders
- Establish and manage RE parks and information center

### **6.1.3.4 Water and Power Engineering Company of Afghanistan Directorate (WAPECA)**

With an objective to conduct surveys, design and develop micro hydro projects around the country, WAPECA undertakes feasibility studies and techno-economical services for development of energy projects. Its roles and responsibilities include:

- Conduct surveys and feasibility studies of the energy projects
- Design and develop small and medium hydro projects
- Assess and prioritize energy projects based on technical, economic and social studies
- Assist the Deputy Minister and the Energy Policy Directorate in development of energy policies and regulations

### 6.1.3.5 Energy Program Directorate

The Directorate consist of 6 units, namely - Programs unit, Energy Distribution unit, Energy master-plan unit, Hydropower unit, Fundraising unit, Thermal Energy unit and Sub-stations unit. The primary objective of the Directorate is to provide reliable and effective power to all the parts of the country from domestic energy sources as well as energy imports. Its roles and responsibilities include:

- Prepare strategic plans for energy projects and annual plans for energy development projects
- Determine and identify hydro potential for the development of power generation projects
- Identify power load centres for installing substations
- Conduct preliminary surveys and determine demand and capacity of 0.4/20 KV power distribution networks
- Prepare and develop Afghanistan Energy Master Plan in consultation with relevant stakeholders
- Establish mechanisms to coordinate with other ministries and donor communities to ensure smooth execution of energy projects
- Prioritize the projects according to the National Development Strategy and Annual Plan
- Prepare the list of development of projects to request funds from MoF and MoEc
- Develop the annual reports of the power sector
- Introduce projects to MEW Finance and Procurement Directorates to facilitate contracts

### 6.1.3.6 Energy Policy Directorate (EPD)

Energy Policy Directorate (EPD) was established in 2009 based on the recommendations from the Independent Administrative Reform and Civil Servant Commission (IARCSC). The primary objective of EPD was to design and develop required energy sector policies and regulations for socio-economic development of the country. EPD comprises 3 units: (energy economy, energy sector development and energy efficiency). The roles and responsibilities of EPD are:

- Design and develop energy laws, policies and regulations as per the mandate and vision of the MEW
- Supervise implementation of the policies, regulations, etc.
- Follow up with relevant authorities for timely approval of the developed laws, regulations and manuals
- Conduct awareness programmes to encourage the private investment and raise awareness about energy laws, policies, strategies, etc.
- Collect data and information on energy demand in the country
- Prepare monthly, quarterly, and annual activity reports
- Perform other activities or tasks assigned by Energy Deputy Minister and Minister of Energy and Water.

### 6.1.4 Ministry of Rural Rehabilitation and Development (MRRD)

MRRD is one of the key Government agencies that is responsible for rural electrification and promoting rural energy services. The jurisdiction of MRRD is limited to village level for developing and implementing energy projects. Coordination with MEW/DABS is required if the project is to be implemented at the district/ provincial level or the project size is more than 1000 KW<sup>25</sup>.

MRRD has prepared District Development Plans, which consider energy as one of the key resources required by rural residents. MRRD has also established a Directorate known as Rural Energy and Enterprise Development (REED) Directorate that takes care of issues related to rural energy. MRRD

<sup>25</sup> Source: An Institutional Analysis of Power Sector in Afghanistan – Barriers to Achieving Universal Access to Electricity, Mohsin Amin, 2017

manages National Solidarity Program (NSP) through which Community Development Centers (CDC) are established to look after local development. NSP enhances rural energy access through micro-hydropower plants, solar home systems and diesel generators. As per the interactions with MEW officials, coordination between MEW and MRRD is weak and there is a strong need to strengthen it.

### **6.1.5 International Funding Agencies**

International financial aid has become the mainstay for the growth of Afghanistan as more than USD 100 billion has been provided since 2001<sup>26</sup> by multi-lateral/bi-lateral institutions such as Gesellschaft für Internationale Zusammenarbeit (GIZ), the World Bank, U.S. Agency for International Development (USAID), Asian Development Bank (ADB), etc. The areas of focus of the financial aid are security, infrastructure development, humanitarian activities, health, education, etc. To support development of these sectors, the multi-lateral/bi-lateral institutions are actively working through their programmes/initiatives in Afghanistan. The financial aid is channelized through various ministries, and in most cases through MoF. The support is provided for both Technical Assistance and Financial Assistance across various sectors.

### **6.1.6 Da Afghanistan Breshna Sherkat (DABS)**

The MEW had a National Electricity Service known as Department Da Afghanistan Breshna Mossasav (DABM), which was converted into a corporate entity in May 2008. Post the corporatization, DABM became DABS, a 100% state owned, independent and autonomous electricity company established under the Corporations and Limited Liabilities Law of Afghanistan. The shares of DABS are owned by MoF (45%), MEW (35%), MoEc (10%) and the Ministry of Urban Development (10%)<sup>27</sup>.

DABS is the principal entity responsible for operations of the power sector in Afghanistan. It was established with an objective to provide cost-effective, reliable, and safe electricity to consumers in order to facilitate economic growth. It owns the central generation, distribution, and transmission assets in Afghanistan<sup>28</sup> and is responsible for the investment, operation and maintenance of these assets.

DABS operates in 34 provinces in Afghanistan and one Director is appointed in each province. The corporate headquarters of DABS is in Kabul and is headed by the Chief Executive Officer (CEO). The CEO is supported by Chief Operations Officer (COO), Chief Commercial Officer (CCO) and Chief Financial Officer (CFO). The total staff strength of DABS is about 7,000. DABS serves about 1 million consumers across Afghanistan and 45% of them are in Kabul city.

### **6.1.7 Private Players**

The energy sector of Afghanistan requires substantial capital investments. According to PSMP, a total investment requirement to meet the envisaged target is USD 10,096 million till 2032. To encourage private investment in energy sector, MEW has been working towards creating a facilitative environment.

### **6.1.8 Afghanistan Chamber of Commerce & Industries (ACCI)**

ACCI is an independent entity, which was formed in 1931, then known as Commercial Arbitration Association. About 90% of Afghan workforce is the member of ACCI and its main objective is to promote domestic production and trade in all the provinces of Afghanistan. ACCI looks after the

<sup>26</sup> Source: <http://www.businessinsider.com/r-a-decade-of-western-aid-in-afghanistan---mission-unsustainable-2014-12?IR=T>, last accessed on 06<sup>th</sup> October, 2017

<sup>27</sup> Source: [http://www.afghan-bios.info/index.php?option=com\\_afghanbios&id=390&task=view&total=3517&start=740&Itemid=2](http://www.afghan-bios.info/index.php?option=com_afghanbios&id=390&task=view&total=3517&start=740&Itemid=2), last accessed on 28<sup>th</sup> September, 2017

<sup>28</sup> Source: An Institutional Analysis of Power Sector in Afghanistan – Barriers to Achieving Universal Access to Electricity, Mohsin Amin, 2017

interests of private sector through its strategic connection with public, investor, donor, academia, media, and foreign channels. Other functions of ACCI include business advocacy, international linkages, industry and export promotions, dispute resolution, etc. ACCI earlier had a body named Afghanistan Investment Support Agency, which has been merged with Afghanistan Ministry of Commerce and Industries now. During its existence, AISA was responsible for providing business licenses to the businesses. However, with AISA's functions being taken over by the Ministry Commerce and Industries, this function is being performed by this Ministry.

ACCI has also set up a union of RE companies known as the Afghanistan Renewable Energy Union (AREU), as discussed below.

### **6.1.9 Afghanistan Renewable Energy Union (AREU)**

AREU is a not-for-profit organization established in 2013 and it focuses on development of RE sector in Afghanistan. It provides a common platform for RE stakeholders to work towards developing affordable and accessible RE in the country. Under AREU, about 50 members from the industry such as project developers, equipment manufacturers and system integrators have come together to form a union with the intention to invest in RE projects in the country, and thus AREU is private sector driven body, unlike the others discussed above.

### **6.1.10 Afghanistan National Standards Authority (ANSA)**

The Afghanistan National Standards Authority (ANSA) was set up under the Standards Law to set standards and codes for products, processes and services with an objective to protect the consumers as well as the environment. ANSA has been involved in developing codes and standards for different sectors including energy. Under ANSA, there is a "National Electro-Technical Committee" which consists of importers, manufacturers, DABS, MEW, MRRD, Technical institutes etc. This committee has adopted around 200 electro technical standards from IEC<sup>17</sup>. Further, it has recently approved a list of IEC standards related to RE including solar PV.

## **6.2 Proposed Additions in the Institutional Framework**

The institutional framework of power sector in Afghanistan is evolving. With the support from the Government and international funding agencies, new institutions are being set up to further refine the framework and attract the private investment. The proposed departments are discussed below:

### **6.2.1 Investment Promotion Desk (IPD)**

It is proposed to set up an Investment Promotion Desk (IPD) in the MEW with the support from GIZ under its IDEA programme. The IPD will support MEW in attracting private sector investments for the energy sector and in promoting development of RE resources for sustainable development of the power sector in Afghanistan.

The IPD is envisaged to undertake following responsibilities:

- Provide relevant information to the private power companies regarding policy framework and approval processes.
- Assist the Deputy Minister, MEW in bid process management of private power projects.
- Guide the investors in the assessment of their project proposals and follow up for timely approvals for setting up the power projects.
- Address the concerns of the investors properly.
- Take proactive steps to attract private sector investment of power sector in Afghanistan.
- Focus on speeding up the investments on the ground through a "one stop" facilitation process.

The current engagement is an initiative by GIZ to support MEW in establishing the IPD.

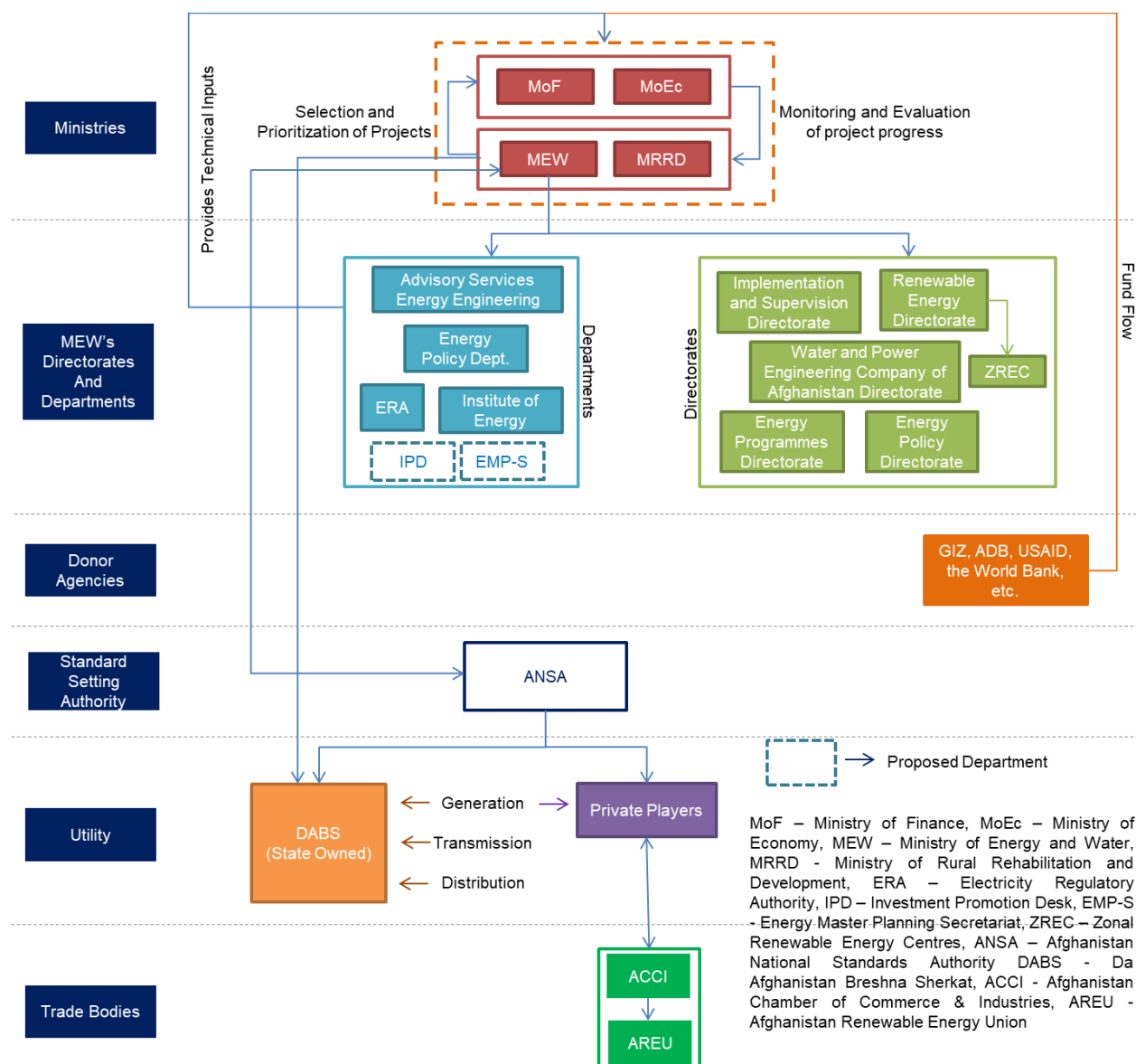
## 6.2.2 Energy Master Planning Secretariat (EMP-s)

EMP-s is proposed to be created in MEW by the Government. It will be primarily responsible for the following activities:

- Updating Afghanistan's Power System Master Plan (PSMP). PSMP is a basic document for all the power sector related policies and planning
- Preparing consolidated budgets for submission to MoF
- Reporting implementation progress to the MoEc

Figure 3 provides the revised institutional framework of energy sector in Afghanistan after setting up the IPD and EMP-s under MEW.

**Figure 5: Projected Institutional Framework for Energy Sector in Afghanistan**



## 6.3 Challenges and Constraints in the Institutional Set Up

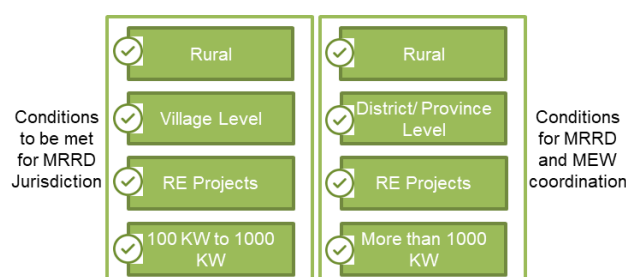
### 6.3.1 Capacity Constraints

Afghanistan has acute and chronic shortage of technical manpower across various institutions in the energy sector. This is owing to the low literacy rates and lack of training infrastructure. Only about 30% of the population over the age of 15 can read and write. Additionally, those who are professionally qualified prefer to work in the private sector due to better opportunities. The dearth of qualified professionals clubbed with inclination of the trained personnel towards working with the private sector results in non-availability of required human resources in the Ministry. This has severely impacted the performance of MEW in terms of speed of implementation of projects (project selection, project review and analysis etc.). MEW's Energy Regulation Department, while having been set up, does not have adequate capacity to undertake tariff determination exercise, analysis of costs, review and monitoring the quality standards etc. on its own.

### 6.3.2 Lack of Coordination between MEW and MRRD

The jurisdiction of MRRD in electricity sector is restricted to rural renewable energy projects. MRRD is required to coordinate with MEW if the project size is above 1000 KW or if the project is being implemented at district or province level. It has been observed that there is a lack of coordination between both the ministries with respect to responsibilities pertaining to implementation, operations and maintenance of the projects. This impacts on the expected service delivery as well.

**Figure 6: Jurisdiction of MRRD<sup>29</sup>**



### 6.3.3 Lack of Regulatory Independence

The electricity regulatory body of Afghanistan is a department within MEW and is functioning under its aegis. This impacts the autonomy and independence of the regulatory body, which is an essential requirement for a well-functioning regulatory authority. MEW is also the owner of DABS,

one of the entities that has to be regulated by the regulatory authority. This overlap also impairs the regulatory decision making of the authority. In order to create a level-playing field for private sector players and the incumbent, the regulatory independence of the authority must be ensured.

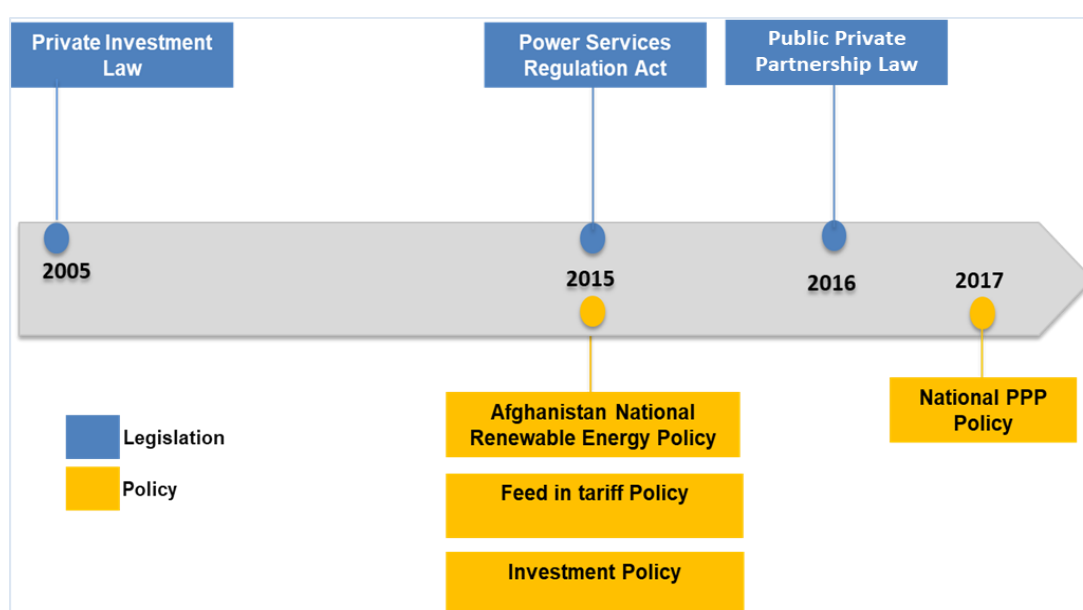
<sup>29</sup> Information Source: Institution and Policy Assessment of Renewable Energy Sector in Afghanistan, 2017, Journal of Renewable Energy



## A7: Existing Policy Framework in Power Sector in Afghanistan

The policy framework for the power sector is still at an evolutionary stage in Afghanistan. Most of the policies have been framed over the last 4 to 5 years. This section will provide an assessment of the policies from the standpoint of how they drive investments in the power sector. Since regulations provide details of the implementation framework of a policy and its enforcement, this section also covers the regulations that have been framed for the sector. While some laws and policies promote private sector participation across all infrastructure sectors including power (Public Private Partnership Law, 2016), there are some specific power sector policies and laws that contain provisions for promoting private investments exclusively in the power sector (for instance Power Services Regulations Act, 2015). This section includes both power and infrastructure policies, laws and regulations covering private investment. The Figure below shows the legislations and policies in a chronological order.

**Figure 7: Policy Timeline**



## 7.1 Legislation Governing Private Sector Participation in Afghanistan's Power Sector

### 7.1.1 Private Investment Law, 2005

The Private Investment Law was passed by GIRoA in 2003 and was later amended on December 6, 2005. This Law has been framed to promote both domestic and foreign private investments for the country. It covers various infrastructure sectors including power. In the power sector, the scope of the Law is limited to only generation and transmission. The Power Services Regulation Act refers to this Law for governing investments in the power sector in Afghanistan.

The Law permits foreign person(s) to make an investment in Afghanistan through a "Registered Enterprise" or through reinvestment from an existing Registered Enterprise. Registered Enterprise can be 100% owned by investors or can be a Joint Venture (JV) between GIRoA and other investors. It also calls for the setting up of Afghanistan Investment Promotion Agency (AISA), to function as the nodal agency to facilitate private investments. This body was duly set up and was functional for several years. However, in 2016, it has been made defunct and has been merged/due for merger with the Ministry of Commerce.

Following are some of the important provisions of the Law with regard to private investment:

**Figure 8: Important Provisions of the Private Investment Law, 2005**

<b>Non-discrimination (Article 16)</b>	<ul style="list-style-type: none"> <li>• Equal treatment to foreign and domestic investors</li> </ul>
<b>Income tax concessions (Article 17)</b>	<ul style="list-style-type: none"> <li>• Registered enterprise (Reg. E) incurring net operating loss can carry forward loss &amp; apply it as deduction under taxable income</li> <li>• Reg. E entitled to accelerated deduction for depreciation on capital assets</li> </ul>
<b>Export-Import duty &amp; other tax concessions (Article 18)</b>	<ul style="list-style-type: none"> <li>• Reg. E to be exempted from export duties on products manufactured in Afghanistan (to the extent permitted in Customs code)</li> <li>• Export license for exports required, to be granted automatically on submission of requisite documents</li> </ul>
<b>Access to Banking (Article 19)</b>	<ul style="list-style-type: none"> <li>• Reg. E can open accounts in foreign currency and use these banks to receive loans and credit in foreign currency from outside Afghanistan</li> <li>• It can also open bank accounts in foreign currency outside of Afghanistan to purchase raw material and machinery etc.</li> </ul>
<b>Land Use (Article 21)</b>	<ul style="list-style-type: none"> <li>• Reg. E shall have right to lease land and will not be barred from leasing property for a period of 50 years</li> </ul>
<b>Transfer of foreign investment capital (Article 22)</b>	<ul style="list-style-type: none"> <li>• Foreign investor shall have right to freely transfer outside of Afghanistan dividends, or distributions treated as dividends under the Income Tax Law, received from the investment, in foreign currency and at the prevailing exchange rate, upon fulfilment of its tax obligations</li> </ul>
<b>Transfer of profits (Article 23)</b>	<ul style="list-style-type: none"> <li>• Foreign investor can freely transfer dividends or distribution from dividends outside of Afghanistan in any foreign currency he/she chooses after satisfying the financial obligations</li> </ul>

#### Observations

The Law in itself has some good provisions as highlighted above in the Figure. However, despite the existence of this law for over a decade, private investment in power sector has not picked up. The reasons are discussion in Section 9.

#### 7.1.2 Power Services Regulation Act, 2015

The power sector is governed by the Power Services Regulation Act, 2015, which was enacted by a Presidential Decree pursuant to the provision of Article 79 of the Afghan constitution.

##### I. Objectives

The main objective of the Act is to provide access to power to citizens of Afghanistan for a fair price and on a non-discriminatory basis. The Act vests the responsibility of implementing the provisions, with MEW, either on its own or with other players such as foreign and domestic private sector. It also directs the Energy Services Regulation Department of MEW to perform the role of Regulatory Authority. Among the many duties and responsibilities of the Regulatory Authority, the three most important duties are as follows:

- Recommending electricity tariffs for approval to the Government after confirmation of MEW.

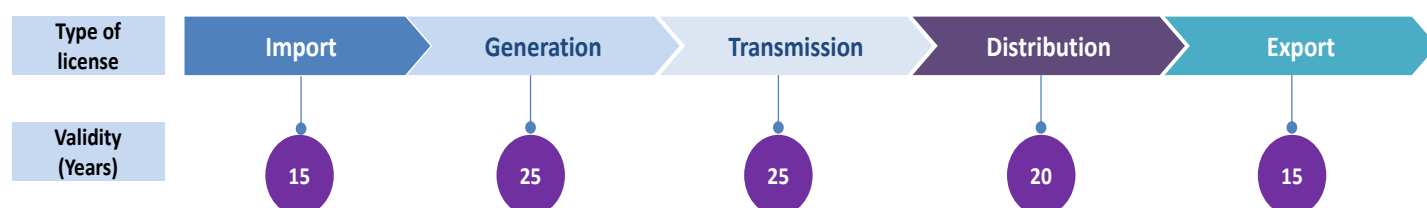
- Facilitating domestic and foreign investment in the energy services under this law.
- Registration, issuance, renewal, suspension, and revocation of licenses
- Investment Support

Chapter 9 of the Act contains specific provisions pertaining to investment support in the power sector. Article 39 stipulates that the investment in the energy sector will take place as per the provisions of the Investment Law. Further, in the specific case of foreign investment, they will be subject to the Private Investment Law in following cases:

- Access to banking facilities.
- Transfer of capital and its profit.
- Transfer of actual foreign debit and other payments.
- Sale of approved enterprise and transfer of income.
- Expropriations, compensation and transfer of funds and right of reference to court.
- Mandatory license

The Act permits both domestic and foreign private sector to provide electricity services. It also provides that without obtaining the license and concluding contract, no individual or entity can construct, install and assemble equipment for power generation, transmission, and distribution, facilities or for import and export of electric power. Generation facility below 100 kW is exempt from generation license as well as captive power plants using electrical energy for own usage. Specifically, it defines that five activities would require license, as presented in the Figure below.

**Figure 9: Activities that Require License in Power Sector**



## II. Use of Land

The Act states that if the land needed for the construction or installation of power plant facilities is government property, then MEW will provide the necessary leasing facilities to the contractors as per the terms and conditions of the contract. Further, if the land needed for easement is a private property, the department shall obtain the passage permit from the owner or possessor of property. It also states that for the land required for construction / operation of energy services, the license holder can lease the land from the owner; otherwise MEW may make an acquisition of private property.

## III. Dispute Resolution

In case of disputes between the license holder and the Energy Services Regulation Department, the parties can resolve by mutual negotiation, or through the disputes resolution authority set out in the contract. In case, the authority is not mentioned in the contract then the investors can choose any one of these avenues mentioned below:

- Mediation of experts based on consent of Parties.
- Disputes Resolution Board of MEW.
- Commercial Dispute Resolution Centre of ACCI.
- Financial Disputes Resolution under the DAB law.
- The United Nations Commission on International Trade Law (UNCITRAL).

- Competent Court in Afghanistan

#### IV. Other relevant provisions

The Regulator may lease the electrical plants in accordance with the provisions of the law.

#### Observations

- The enactment of the Power Services Regulation Act is a step in the right direction. However, the private sector investors in Afghanistan have raised its concerns on some aspects of the Act, such as the independence of the Regulator and have sought amendments<sup>30</sup>. Further, the Law vests a wide range of responsibilities on the Regulatory Authority including preparing the National Development Programme which ideally comes under the purview of MEW and MRRD, creating overlaps and confusion in the responsibilities.
- The Law is oriented more towards defining the terms and conditions of License, does not define the basis of tariff determination, one of the important themes for conducting business.
- Article 9 of the Law states qualifications / disqualifications criteria for a person/entity for permits. Sub-section (2) of Article 9 states that a legal entity whose one or more shareholders or members of its Executive Board or Board of Directors, who have lost their legal capacity will not be eligible to apply for the license. The law does not specify the time frame till which the disqualification will be in force. It also does not mention the conditions for the entity to become re-eligible to apply for permits. Also, tying the disqualification conditions with the shareholders increases the chances of an entity being disqualified, due to huge number of shareholders. This is counter intuitive to the business as the Company cannot be held responsible for the actions taken by the shareholders in their personal capacities. The meaning of "losing legal capacity" is also not defined in the law. Absence of this definition or reference to any other law to interpret this term leaves it open to wide interpretations.

#### 7.1.3 Feed-in –Tariff Policy, 2015 (Draft)

This policy provides revenue assurance to private players along with provisions for fast-tracking projects in the RE sector<sup>31</sup>.

#### 7.1.4 Private Sector Investment Policy, 2016 (Draft)

The primary objective of this policy is to facilitate private investment in the power sector. The Policy has the following provisions safeguarding the interests of the private sector:

- **Investment Protection:** Multilateral Investment Guarantee Agency (MIGA)<sup>32</sup> will provide insurance services to companies in Afghanistan. Overseas Private Investment Corporation (OPIC) also provides insurance against currency risk, political risk and expropriation of assets by the host country.

<sup>30</sup> An Institutional Analysis of the Power Sector in Afghanistan –Barriers to Achieving Universal Access to Electricity, Mohsin Amin, 2017

<sup>31</sup> Details to be added from the English version of the Policy after it is shared by MEW

<sup>32</sup> MIGA is a member of the World Bank and it provides insurance political risk and credit enhancement guarantees. Such guarantees help investors protect foreign direct investments against political and non-commercial risks in developing countries.

- **Dispute Resolution:** The Policy mentions that the dispute may be resolved as per the clauses stated in the contract. However, in case of non-resolution, the disputes may be referred to one of the bodies referred to in the Power Services Regulation Act, 2015
- **Simplification of Administrative procedure:** Online system for processing documents will be implemented to simplify the administrative procedure and eliminate corruption.

#### Observation

The Policy while acknowledging these important provisions is not very comprehensive in its coverage. It does not define the details of several key provisions:

- For instance, there are no details on the financial incentives to be offered to private sector. While it mentions that PPA is mandatory as a sort of guarantee to the investor, it does not provide information on the type of incentives, quantum of incentives which will be offered.
- Secondly it does not mention how the online system will benefit the private investors, in terms of what documentation (approvals, clearances) will be processed online, the time frame for processing applications etc.

While the Policy refers to AISA, it is recommended that it is revised to include IPD in place of AISA, as the former has merged with the Ministry of Commerce and Industries. The policy may be revised to refer to IPD to act as the single window agency to facilitate clearances and approvals.

#### 7.1.5 Public Private Partnership Law, 2016

The PPP Law, 2016 has been framed to provide a statutory framework for PPPs in Afghanistan. Prior to the enactment of this law, Article 40 of the Procurement Law, 2008 served as the legal framework for PPPs in Afghanistan. However, this law was not adequate to address the growing role of private sector as envisaged in various sectors. For instance, while it mentions that contracts for private investment in construction/operation of public works will be undertaken through a tender based process, it did not sufficiently elaborate on the types of PPP to be executed in the sector. Given the emphasis on PPP and the role it is envisaged to play to drive investment in Afghanistan, a law governing PPPs was considered necessary highlighting types of PPP, sectors where PPP will be undertaken etc.

This Law is applicable on entities which are financing projects on PPP<sup>33</sup> basis.

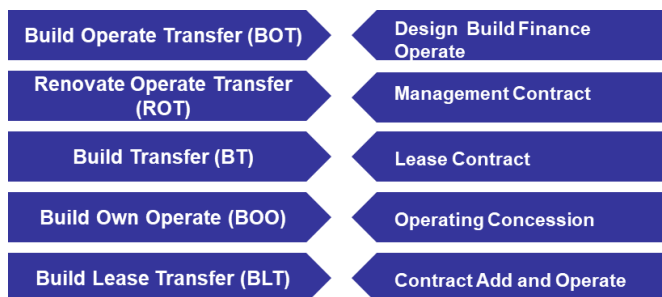
- **Boundary conditions:** It permits PPP only in power generation and excludes transmission and distribution for the time-being.
- **Modes of procurement:** The procurement process in the power sector is governed by the Public Procurement Law, 2017. However, Article 27 of the Public Procurement Law states that contracts for private investment in construction and/or operation of public works including PPPs will be governed by a separate regulation. There has not been any regulation issued to govern PPPs.
  - The PPP Law broadly defines two modes of procurement.
  - (a) **Solicited projects:** Under the projects, GIRoA may choose to opt for any of the three modes such as :
    - **Open bidding:** Here, GIRoA may opt for single stage or two stage tender process by inviting tenders from eligible parties, based on least cost and best quality of proposal.
    - **Direct procurement:** In this method of procurement, quotations/proposal is received from identified supplier and project is awarded post approval of the terms and conditions.

<sup>33</sup> MoF prepares a separate procedure for PPP projects where the expected investment value is lower than minimal amount (an amount fixed by the High Economic Council at recommendation of the MoF)

- **Competitive dialogue:** This procedure may be adopted for complex and high risk projects where the Contracting Authority engages with the bidders in a dialogue and the bidders have a major role in defining the solution. The Contracting Authorities may undertake a pre-qualification process and invite shortlisted applicants to be part of the 'dialogue' during which various aspects of the project can be discussed and solutions can be proposed. The Contracting Authority can continue the dialogue until it identifies one or more solutions that cater to its requirements. It may then close the dialogue and invite final tenders.

**Figure 10: Models of PPP**

- (b) **Unsolicited projects:** The project developer can also submit an unsolicited proposal to MEW for consideration
- **Models of procurement:** It defines ten models of PPPs as shown in the Figure 8. The definitions of these models are provided in the Annexure.
  - **Financing:** PPP projects will be financed through two types of funds:
    - Viability Gap Funding:
  - This fund will be created by MoF to fund projects which are socially and economically viable, but may not be viable financially. This support is offered to the project developers to make the projects financially viable.
  - **Project Development Fund:** This Fund will be used to fund the preparatory work and consulting services, pre-feasibility studies, reports etc. prepared while structuring a PPP project.



### Observations

While the Law brings some clarity on PPPs in the power sector by defining which segment of power sector will attract PPPs, models and methods of procurement that will be applicable, there are some areas that still lack clarity such as the following:

- **Allocation of risks:** The Law does not have a clear provision on risks stating that allocation of the risks will be enshrined in the contract and will not be subject to changes or modification post the award of the contract.
- **Capacity building measures:** The law does not have any provision on capacity building measures at the institutional level. Since PPPs are relatively new to the country and being complex transactions, organizational and individual capacities for identification, procurement and managing PPPs will have to be built over time. The Law does not define how the government departments can build their capacity (will they have access to toolkits/ training programmes etc.) and whether there will be specific training programmes /workshops conducted for them.

## 7.2 Policies Promoting Private Sector Participation in Afghanistan's Power Sector

### 7.2.1 National Public Private Partnership Policy, 2017

#### I. Objectives

This Policy aims to improve public infrastructure provision and service delivery through effective utilization of private sector investments and business expertise. It also aims to provide financial and non-financial incentives to the private sector.

#### II. Duration



The Policy does not mention the timeframe till which it will be in force.

### III. Boundary conditions

The Policy is applicable to both large and small projects. Smaller projects will be covered on a case to case basis, considering the nature and importance of project.

### IV. Institutional framework

The law vests the responsibility of developing PPP manuals, standards guidelines and documents for PPP, on MoF. The technical support to contracting entities (Line ministries, Government Departments), administrative support and other advisory inputs will be provided by the Central Partnership Authority (CPA) working within the MoF. For each sector, the onus of designing and formulating policies, strategies and establishing an enabling environment for PPPs has been entrusted to the line ministry concerned. In case of energy, MEW will be key agency to define the rules of procurement/PPP contracts and the implementation procedures. It implies that for the energy sector. MEW will look after Identification, preparation, procurement, and monitoring and evaluation of PPPs. CPA will coordinate with MEW for assessing affordability, value for money, and feasibility associated with PPPs.

### V. PPP Cycle of Implementation

The Policy describes the steps of implementing a PPP project. It also mentions the cycle of implementation of a PPP project as follows:

**Figure 11: Cycle of Implementation of a PPP Project**



The Policy describes the support that will be provided by GIRoA to the private project developer with regard to types of insurance coverage that are deemed necessary for PPPs. It will provide guarantee and commitments such as, monetary payment to the organization, payment for goods and services provided by the GIRoA, implications of nationalization, expropriation, property rights, exchange and transfer of foreign currency and compensation of the state's legal liabilities to a private partner. Further, it aims to provide complete transparency in the mechanism and procedure. It will display information through media and CPA's website and share with public once project gets closed. It will also publicize all laws, regulations, guidelines, short descriptions, information about potential PPP, inviting EoI. The Policy also calls for preparing standard PPP Guidelines on lines of international experience and will ensure complete transparency in information flow to investors. PPP Guidelines have not been issued yet by the MoF.

#### Observations

- **Value for Money:** Some principles for formulating a PPP project such as "Value for Money (VfM)" are highlighted in the Policy. However, given the fact that information is always a constraint in conducting VfM analyses and that power sector has its own characteristics, more clarity is required on how this analysis is proposed to be done, in terms of what data will be used, who will provide this data for the VfM analysis etc.
- **Monitoring of PPPs:** The provisions for monitoring and evaluation are not elaborated in the Policy. It is only mentioned that MoF will submit periodic reports to the Cabinet. A proper

mechanism to collect data on PPPs will be required for two purposes 1) monitoring of ongoing projects 2) to structure future PPPs

## 7.2.2 Afghanistan National Renewable Energy Policy (ANREP), 2015

This Policy aims to provide thrust and direction to the RE sector. The Policy aims to tap the RE potential by creating a market for RE and changing the present course of donor-supported projects to Public Private Partnership (PPP) driven projects in the interim, to a fully private sector led market in the long term. The assessment of this Policy as per policy elements described in section A5 is discussed below:

### I. Objectives

One of the main objectives of the Policy is to increase deployment of RE technologies to meet the targets of Power Sector Master Plan (PSMP), i.e. to deploy RE constituting 95% of total energy mix of 5000-6000 MW in 2032 through grid-connected, mini-grid and standalone mode. In addition, there are several other objectives however, from the perspective of promoting private sector participation the policy aims to provide fiscal and non-fiscal incentives to private sector investors and equipment manufacturers/ suppliers. It also aims to increase competitiveness of RE technologies and nurture the local industry. The Policy is aligned to PSMP and Afghanistan National Development Strategy (ANDS) and connects with Rural Renewable Energy Policy to ensure seamless implementation of the Policy in rural areas. The key highlights of PSMP and ANDS are provided in Annexure 1.

### II. Targets

It aims to deploy 4500-5000 MW (95% of total target as per PSMP) by 2032.

### III. Duration

The Policy is applicable for the period 2015-2032. It will be implemented over two terms. Term 1 (2015-2020) will create enabling conditions to support the development of projects in PPP mode and in Term 2 (2021-2032), RE projects will be developed in full commercialization mode.

### IV. Focus Areas

The Policy does not focus on any particular region or zone. However, it calls for zone wise mapping of RE sources and an RE Atlas for Afghanistan to be developed based on the mapping.

### V. Technologies

It covers all the RE technologies including but not limited to solar (photo voltaic and thermal), wind, biomass, municipal solid waste, geo-thermal, fuel cells, micro and mini-hydro power, clean storage and hybrids of two or more of the above, including hybrids of RE with conventional fuel based options such as diesel and fossil fuel based power plants.

**The RE technologies identified above will be developed in the following three modes: 1) Grid-connected 2) Mini-grids 3) Hybrids/stand-alone.**

A few high priority areas have been listed out in the Policy, which need to be focussed on first before the full scale implementation of RE are as follows:

- Hybridization of existing diesel based mini-grids with RE sources.
- Rehabilitation of non-operational/partly operational RE projects preferably through PPP mode.
- Provinces which will not be serviced by DABS in the near future as per PSMP.
- Distributed generation in economic zones and industrial parks.
- Grid-connected projects in PPP mode.
- Powering telecom towers through RE.



- Roof-top solar PV projects with and without net metering.
- Biomass energy for rural communities.
- Solar/wind pumping with finance facilitation to farmers.
- Boundary conditions

**Table 5: Hydro Project Classification**

Type of Hydro project	Capacity (MW)
Pico	< 2.5 kW
Micro	< 250 kW
Mini	< 2500 kW
Small	<25000 kW

The Policy covers all the RE sources mentioned above, from Pico Watt to Mega Watt scale, except for Hydro. Hydro upto 3 MW fall under the purview of this Policy and it categorizes hydro into the classes as shown in the Table 3.

## VI. Implementing agencies

- **Nodal Agency (National):** The onus of strategizing, planning, coordination and implementation of the ANREP is on MEW. Within the MEW, the Renewable Energy Department (RED) will be the nodal department for all RE matters including assessing RE potential and preparing detailed resource maps. For all rural projects below 1 MW, MRRD will support in the implementation. In Term 1, a coordination committee headed by the Deputy Minister of Energy will be established under MEW. Term 2 will review the progress of implementation made under Term 1. ANREP also calls for the formation of a Renewable Energy Coordination Committee (RECC) to coordinate and facilitate the deployment of RE. RECC will have members from key ministries such as MEW, MRRD, MoF, MoEc, Public Health, Education, Private Sector, DABS etc. among others.
- **Nodal Agency (Zonal):** Zonal Renewable Energy Centres (ZRECs) will be set up to oversee the implementation of RE projects in their respective regions. ZRECs will coordinate with RED to execute their responsibilities. So far, 5 zonal units have been created in the five river basins of Afghanistan<sup>34</sup> and more units will be created in Term 2.
- **Operation and Maintenance (O&M):** For all grid-connected and mini-grid projects above 100 kW DABS will be responsible for O&M. For O&M of rural RE projects utilities will coordinate with MRRD.
- **Private sector:** Private sector such as Independent Power Producers (IPP) will be encouraged to develop and manage RE projects on Build-Own-Operate (BOO) basis.

## VII. Market for RE

As per the Policy, grid-connected projects will be the first ones to attract investment based on risk perception, followed by distributed generation projects and finally the off-grid standalone projects.

Following are the key provisions relevant to the private sector:

- **Licensing of RE projects:** In line with the Electricity Service Law, licenses will be issued for generation, transmission and distribution of RE projects above 100 kW capacity as well as for the O&M. However, projects below 100 kW do not require licenses for setting up or O&M. These projects however will be subject to the technical oversight of ZREC for the safety and quality standards of equipment.
- **Financial incentives:** Subsidies and incentives are considered important given the historical pattern of donor support and the fact that RE projects won't be able to self-sustain in the immediate term. However, the subsidies will be rationally given and targeted depending upon

<sup>34</sup> The five principal river basins in Afghanistan include: Amu Darya, Hari Rud, Kabul, Helmand and Farah Rud

technology, location and design of projects. Subsidies will be in the form of preferential tariffs, Performance linked or Viability Gap Funding. Other incentives include:

- **Interest subsidies and soft loans** (low interest rates, moratorium/grace period on repayment, favorable debt-equity ratio).
- **Customs duty and sales tax exemption** for import/ sale of machinery, equipment and spare parts meant for the initial installation or for balancing, modernization, maintenance, replacement, or expansion after commissioning of RE projects.
- **Income tax exemption** for the RE project developer for the first 5 years of its commercial operation.
- **Other incentives and rebates** that are considered necessary from time to time and on case-by-case basis.
- **Other incentives:** There are some additional incentives which are given to RE projects such as the following:
  - **Wheeling and Banking:** All grid connected projects producing power for captive or third party use will be allowed to wheel and bank the electricity through national grid.
  - **Third party sale:** Third party sale is allowed under the Policy. It also mentions the plant must adhere to the national grid code and safety standards and should be designed in a grid-compatible mode.
- **‘Must-run’ status:** RE projects will be given a “must run” status where all the power generated from such projects will be evacuated and utilized by the Utility (DABS). The responsibility of laying the line from generation to the interconnection point of the utility will be the responsibility of the developer.
- **Land acquisition:** Government will facilitate land acquisition for grid-connected and mini-grid projects and in some cases will procure and lease it to developers on long term basis. The procedure for land leasing will be on the basis of competition (auctions).
- **Tariffs:** ANREP defines the basis of tariff determination for grid-connected, distributed generation, hybrid projects and off-grid standalone projects as follows:

**Table 6: Basis of Tariff Determination for Different Projects**

Type of projects	Basis of Tariff determination
Grid-connected projects	Cost-plus basis. PPA will be signed between MEW, DABS, private utility and the project developer mentioning tariffs and other escalations
Distributed generation projects	Cost-plus principle: For those projects which supply electricity to a third party, tariffs will be mutually negotiated between MEW/utility, project developer and the consumer. In those areas where conventional fuels are more expensive than RE sources owing to the cost of transportation involved, the guiding principle of tariff determination will be avoided cost
RE-diesel hybrid projects	Replacement cost of diesel and/or prevailing tariffs whichever is less.
Off-grid standalone projects	Mutual negotiation between project developer and consumer with oversight from ZREC to ensure that consumers are not charged with high tariffs.

While there is no Regulatory Authority to regulate the power sector yet, the Policy highlights that some policy provisions will be under the purview of Regulator, whenever it is operational. For instance, notification of tariffs, drafting PPAs, determination of wheeling, banking and transmission loss charges, issuing directives and other regulations, as required.

- **Support to local manufacturing:** Local manufacturing, assembly, installation and servicing would be created and supported through a two pronged strategy. First, a cadre of entrepreneurs

would be created through technical and vocational training given by MEW (under its Vocational Training Centre). Additionally, RE enterprises would be given a slew of incentives such as access to start up finance, working capital, skill based training, favourable tax regime etc.

- **Financing:** The subsidies and incentives to private sector will be allocated through a corpus funded from pooling the government budgetary resources and donor funds. A separate institution for providing RE specific finance will be created and the preparatory work required for setting up such an institution will be undertaken in Term 1.

## Observations

**Sector wise targets:** The Policy has defined overall RE targets but does not mention sector wise targets, which could possibly be due to lack of comprehensive resource assessment and estimation which is yet to be completed. For instance, there is no official estimate of geo-thermal potential despite rich potential of geo-thermal energy in the main axis areas of Hindu Kush. Given different stages of maturity and technology advancements, targets for a particular RE subsector are essential to be set. Further, the allocation to private sector (in that particular sector) is essential for generating interest and encouraging their involvement.

**Business models for setting up RE projects:** ANREP does not define business models for private sector clearly. It mentions that private projects such as IPP will be encouraged on BOO basis, however the procurement process (nomination or bidding route) is not specified in the Policy. It also mentions that grid connected projects in PPP mode will be prioritized but the modalities such as the forms of PPP (work and service contract/ management & maintenance contract/ build operate transfer/ full privatization), procurement process for these projects etc. are not defined.

**Quantum of subsidies:** There is not much clarity on the quantum of subsidies, time-frame for giving the subsidies, and what is covered under provision "Security under project implementation". It highlights that detailed guidelines for each of the grid-connected, distributed generation, off-grid and roof-top solar PV projects will be framed post the issuance of this Policy. These guidelines are under process and have not been finalized yet.

**Business process support:** While the institutional set up has been mentioned in ANREP, the facilitation that MEW will provide to private sector in terms of getting approvals and clearances has not been defined.

**Land allocation:** Land allocation process has not been clearly detailed out as to which government entity will facilitate land acquisition (MEW/MRRD), the tenure of land lease etc. Land is one of the main inputs for project development, and thus clarity on its allocation is imperative.

**Timeframe for promoting private investment:** The Policy aims to increase private participation in a gradual manner starting from PPP to full-fledged private participation. However, it does not delineate how it proposes to achieve the same and what are the timeframes for doing so. While the terms have been defined in the Policy, the sector development progression under each Term has not been defined.

### 7.2.3 Afghanistan Rural Renewable Energy Policy, 2013

This Policy is also directed towards the deployment of renewables, however, differs from the previous policy in the sense that its scope is limited to rural areas only. The ANREP on the other hand, targets the RE sector on a whole (regardless of rural or urban applications).

#### I. Objectives

This Policy has been framed to create conditions for the development of renewable technology for rural communities to meet their energy demand. It aims to displace polluting fuels for lighting, cooking and heating with clean RE sources. One of the guiding principles of the Policy is to facilitate private sector participation as rural energy service providers, including equipment dealers and cooperatives.

For the successful implementation of this Policy, it identifies regulatory framework to be a critical element. It defines the regulatory measures to be taken including developing pricing and tariff structures, establishing procedures and charges to evacuate power from the point of generation, developing PPA between energy providers and utilities and developing grid codes.

## **II. Technologies**

The Policy covers wind, solar, biomass, geo-thermal and hydro resources

## **III. Targets**

There are no specific targets mentioned in the policy for specific RE sources.

## **IV. Duration**

The Policy envisages implementation over three phases as follows:

- **Short term (up to 2016):** Projects will be identified for the implementation by public and private sector. Public sector and donor financing will be available for those areas which are not commercially viable for private sector to electrify owing to low demand and unfavourable economics. Projects will be selected based on criteria developed by MEW and MRRD jointly. Communities will undertake the O&M of such projects after proper training. Private sector including private enterprises, entrepreneurs will be encouraged to undertake commercially viable generation projects using RE at any suitable location. Areas which have sufficient density and are financially viable would be serviced through mini-grids to be set up by private sector.
- **Medium term (2017-2021):** All those projects achieving financial closure during 2017-2021 will be a part of the medium term. Based on international RE market development and domestic experience from the previous term, policy will be defined/ changed.
- **Long term (2022-2027):** All those projects achieving financial closure during 2022-2027 will be a part of the medium term.

## **V. Implementing agencies**

The Policy will be implemented by the MRRD's Rural Energy and Enterprise Directorate along with support from MEW and Provincial Governments. Provincial Governments would be involved for the identification, planning, implementation and monitoring of the projects at the village level. For projects below 100 kW, the responsibility of implementation will be on MRRD, for all projects which are above 100 kW, it will be coordinated with MEW. All the other projects for commercial and urban applications, coordination is to be done by MEW.

## **VI. Financing**

In view of the low incomes of the rural population, their ability to pay for services and high capital costs of many rural electrification options, affordable financing mechanisms will be developed, including micro-credit, leasing, pre-paid meters and fee for service options.

## **VII. Market for RE**

- **Business models:** Business models that allow for both consumptive and productive uses of RE will be promoted. Mini-grids around income generating micro-enterprises will be encouraged such that RE is integrated into water, agriculture, education and telecom sectors.
- **Incentives:** The same incentives highlighted earlier for the RE projects under ANREP will apply here under this Policy, equally to private, PPP and public sector projects. In addition, subsidies will be provided to small hydro plants up to 1 MW capacity.
- **Standards:** Regulation, safety and quality standards and codes of practice will be developed by ANSA.

### 7.3 Policy Framework Matrix

There have been several developments towards increasing private investment. There are some obvious limitations and areas requiring greater clarity as highlighted in earlier sections. Based on the analysis, a summary table on the parameters assessment is provided below. Most of the policies have well-defined objectives and some provisions highlighting government support, be it in terms of incentives or funding support to be provided by the government through viability gap funding or other mechanisms. However, except the ANREP, other policies do not elaborate the incentives to be given to private investors in detail (type of support, quantum of support and time frame till which it will be applicable). Further, a summary of investment friendly policies is also provided in Annexure.

**Table 7: Summary of Policies**

Components	Private Investment Law, 2005	Power Services Regulation Act, 2015	PPP Law, 2016	ANREP, 2015	Rural Renewable Energy Policy, 2013	Investment Policy (Draft)	PPP Policy, 2017
Objectives	✓	✓	✓	✓	✓	✓	✓
Targets	x	x	x	✓	x	x	x
Duration	x	x	x	✓	✓	x	x
Focus areas	x	x	x	x	x	x	x
Boundary conditions	✓	x	✓	✓	x	x	✓
Government Support (Incentives)	✓	✓	✓	✓	✓	✓	x
Technologies	x	x	✓	✓	✓	x	x
Markets	x	x	x	✓	✓	x	x
Implementing agencies	x	✓	✓	✓	✓	x	✓
Grievance Redressal	x	✓	✓	x	x	✓	x

## A8: International Experience

This section presents the international experience in promoting private participation in the power sector. Experiences of two countries viz. Bangladesh and Sri Lanka have been analysed. Bangladesh and Sri Lanka provide a similar context being South Asian countries, having witnessed wars and internal strife. The experience of these countries provides lessons for Afghanistan, particularly on the strategies adopted for implementing the policies.

### 8.1 Bangladesh

Bangladesh is one the fastest growing countries of South Asia. Its economy has been consistently growing with an average GDP growth of 6.2% over a decade<sup>35</sup>. The power sector in Bangladesh is dominated by thermal power generation with natural gas forming the dominant share of 62%, the rest being contributed by other sources such as high speed diesel, heavy fuel oil etc. At the same time, it is also one of the largest markets for solar home systems with Infrastructure Development Company Limited (IDCOL) installing more than 4 million off-grid home systems since 2003, serving 18 million people.

#### Fiscal and financial incentives for private sector

Private sector plays an active role in the power sector with about 40% ownership of the total installed capacity. This is mainly because of a favourable policy framework established by the Government of Bangladesh (GoB). GoB has notified several policies such as Private Sector Power Generation Policy of Bangladesh, 1996 (revised 2004) and Policy Guidelines for Enhancement of Private Participation in the Power Sector, 2008. It has also provided several incentives and facilities for the private sector as indicated in the table below.

**Table 8: Incentives and facilities for Private investors outlined in Private Sector Power Generation Policy, 1996 (revised 2004)**

Fiscal Incentives	Facilities & incentives for foreign investors
<ul style="list-style-type: none"> <li>➤ Exemption of corporate income tax for a period of 15 years.</li> <li>➤ Repatriation of equity along with dividends allowed freely.</li> <li>➤ Exemption from income tax for foreign lenders to such companies.</li> <li>➤ The foreign investors will be free to enter into joint ventures.</li> <li>➤ Allowed to import plant and equipment and spare parts up to a maximum of 10% of the original value of total plant and equipment within a period of twelve (12) years of commercial operation without payment of custom duties, VAT and any other surcharges as well as import permit fee except for indigenously produced equipment manufactured according to international standards.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Tax exemption on royalties, technical know-how and technical assistance for their repatriation.</li> <li>➤ Tax exemption on interest on foreign loans.</li> <li>➤ Tax exemption on capital gains from transfer of shares by the investing company.</li> <li>➤ Avoidance of double taxation in case of foreign investors on the basis of bilateral agreements.</li> <li>➤ Exemption of income tax for up to three years for the expatriate personnel employed under the approved industry.</li> <li>➤ Remittance of up to 50% of salary of the foreigners employed in Bangladesh and facilities for repatriation of their savings and retirement benefits at the time of their return.</li> <li>➤ No restrictions on issuance of work permits to foreign nationals and employees related to the projects.</li> <li>➤ Facilities for repatriation of invested capital, profits and dividends.</li> </ul>

<sup>35</sup> Source: Monetary Policy Statement: July-December 2016" Bangladesh Bank, Bangladesh, [https://www.bb.org.bd/monetaryactivity/mps/mps\\_current.pdf](https://www.bb.org.bd/monetaryactivity/mps/mps_current.pdf), last accessed on 1- November-2017

As a result, private sector has played a major role in the off-grid energy development in Bangladesh. There are several examples to showcase their active involvement. For instance, Purobi Green Energy Limited (PGEL) and Prokaushali Sangsad Limited (PSL) have invested and installed first solar mini-grid on Sandwip Island where PGEL invested 20% and remaining amount was funded by grant/loan from IDCOL. The mini-grid is the first utility of its kind in Bangladesh with capacity of 100kW and a 40kW back up diesel generator. Further, solar mini-grids are also being encouraged through IDCOL's concessional financing of 30%. Private players are expected to arrange only 20% of the project cost as 50% is financed by development partners. Concessional financing is provided at 6% interest rate with quarterly payments over a maximum period of 10 years. Grace period of 2 years is allowed in this program.

### Types of private participation

The GoB has accorded capacity enhancement a top priority in the power sector and has permitted short term projects to be set up on immediate basis such as rental/quick rental or private ownership projects. The government is permitting some private sponsors on unsolicited basis for setting up power generation stations within the specified timeframe. At present, 6 power plants (866 MW) are at tendering stage by public sector and 38 power plants (total 6,738 MW) by the private sector. Additionally, contracts were signed for 100 power plants (42 Government, 20 Rental, and 38 IPP) with total cumulative capacity of 19,724 MW. Of these 100 projects, 66 projects are commissioned with installed capacity of 7,557 MW and the rest are under construction.

### Role of Investment Promotion Agency

The country also has an Investment Promotion Agency, known as the Bangladesh Investment Development Authority (BIDA). BIDA is the facilitator of investments in all the sectors of the economy. The functions of BIDA are listed below. In addition to these functions, BIDA also undertakes policy advocacy.

**Figure 12: BIDA's Facilities<sup>36</sup>**

Pre-investment information & counselling service	Investor welcome service (faster immigration)	Registration/approval of foreign, joint-venture & local project
Approving work permit for foreign national	Facilitating utility connections	Assistance in obtaining industrial plots
Facilitating import of capital machinery & raw materials	Approving remittance of royalty, technical know-how & technical assistance fees	Approving foreign supplier's credit

Bangladesh has taken several measures to attract private investment as outlined above and going forward, there is immense opportunity in the power sector (distributed generation) as only two-thirds of the population is connected to the grid. Similar initiatives can be extended to the private sector in Afghanistan.

## 8.2 Sri Lanka

Sri Lanka today is at the threshold of moving to an upper middle income country with 21.2 million people and per capita gross domestic product (GDP) of \$3,835 in 2016. Private sector has played a significant role in Sri Lanka's energy sector. The role of private sector increased after mid 1990s power crisis. During the early 1990's, close to 75% population was living without electricity. During

<sup>36</sup> Source: BIDA website <http://bida.portal.gov.bd/>, Last accessed on 5-November-2017



this period, Non-Governmental Organizations (NGOs) and private sector firms introduced stand-alone RE technologies such as solar home systems and community based village micro-hydro power to cater to the electricity needs of the remote communities. The efforts of private sector along with NGOs resulted in government introducing a 5-year World Bank funded project named Energy Services Delivery Project (ESDP) for financing the off-grid systems in 1997 and in 2002. It ended in 2011. The total capacity of the off-grid RE technology systems established was about 8 MW<sup>6</sup>. These systems provided electricity to about 130,000 remote households.

Sri Lanka's energy system consists of large scale thermal and hydro based power plants owned by the national utility Ceylon Electricity Board (CEB) and IPPs. CEB purchases the electricity from IPPs with whom it has entered into contracts. IPPs are largely diesel and combined cycle plants with some amount of RE based capacity as well<sup>37</sup>. As of 2014, there were 7 IPPs in the country. Private sector companies have been involved in the installation, after-sales and maintenance of solar home systems. They were also an active part of the village micro hydro programme where private sector consulting companies played a supporting role as project facilitators.

### Investment support agency

Sri Lanka also has an investment facilitation agency known as the Board of Investment (BoI), which is the central focal point of facilitation for the investors. It provides the required information and guidance to potential investors before submitting the project application, coordinates with other agencies to get required approvals and clearances and provides required assistance throughout the project cycle. Following are some of the important functions undertaken by BoI.

**Figure 13: Functions of BoI**

Investment facilitation	Visa facilitation	Engineering approvals	Partnership finder
Environmental clearances	Legal Services	Web-submission	Land bank

Sri Lanka's energy market structure is similar to the setup which Afghanistan is moving towards. The number of IPPs in Sri Lanka have increased through measures such as attractive cost based technology specific tariffs.

To attract investment in Afghanistan, technology specific Feed in tariffs and other incentives should be introduced, as adopted in Sri Lanka.

<sup>37</sup> 100% Electricity generation through Renewable Energy by 2050: Assessment of Sri Lanka's power sector. ADB, UNDP, 2017



## A9: Conclusion

Afghanistan has initiated several steps to create an environment conducive for private investment in the power sector. This includes the formation of new institutions (IPD) and issuance of new legislations and policies. While there are some obvious limitations in the policies (Section 7), it needs to be acknowledged that the GIRoA has embarked on the right path. The main limitations which have emerged from the policy analysis are as follows:-

- **Independence of the regulator:** The MEW's Energy Regulatory Authority Department, also known as Energy Services Regulation Department, is the Regulatory Authority for the power sector. However, this department being under the MEW is not independent and is susceptible to the influence of MEW in important decisions such as tariff setting, awarding licenses etc. To perform its functions under the mandate vested to it under the Power Services Regulation Act, 2015, it is necessary that it has an arms-length relation with MEW and is set up as an independent entity.
- **Lack of clarity on tariff setting process:** There is no clarity on the tariff setting process adopted by DABS as well as there are no Guidelines/Regulations defining the standard methodology for setting tariffs for electricity and technology wise renewable Feed in Tariffs (FiTs)
- **Lack of clarity on fiscal and financial incentives:** Policies including the ANREP and the Investment Policy do not provide sufficient details on the quantum of incentives to be given to private sector. The Guidelines for policy implementation detailing out the procedure to avail incentives, quantum of incentives, proposal submission formats etc. have not yet been brought out which will provide the much needed clarity on the aspects highlighted above.

However, by initiating the first steps towards a facilitative policy framework, the government is trying to create the necessary environment for bringing private investment. GIRoA aims to move towards a market structure where the growth is led by private sector. This is being planned in a phased manner by first allowing competition in generation (allowing privately owned generators to sell electricity to the grid) and then gradually introducing private participation in distribution (in areas that are not served by DABS grid).

Efforts are already underway to bring IPPs in the generation segment in both conventional and RE as highlighted in Section 5. Procurement process has begun for several projects. As highlighted in ANREP, high impact opportunities (large scale grid connected projects, followed by mini-grids and solar PV rooftops etc.) should be leveraged first.

At the same time, there is also a need to set targets realistically. It is recognized that in the immediate term grid may not reach all the provincial capitals, given the low access levels at present. Therefore, there is a need to focus on distributed and standalone RE. Here, the private sector can play an important role in setting up infrastructure and serving such areas. MEW along with MRRD and DABS can delineate the areas which will not be served in the near to medium term and award contracts to private developers based on a transparent bidding process.

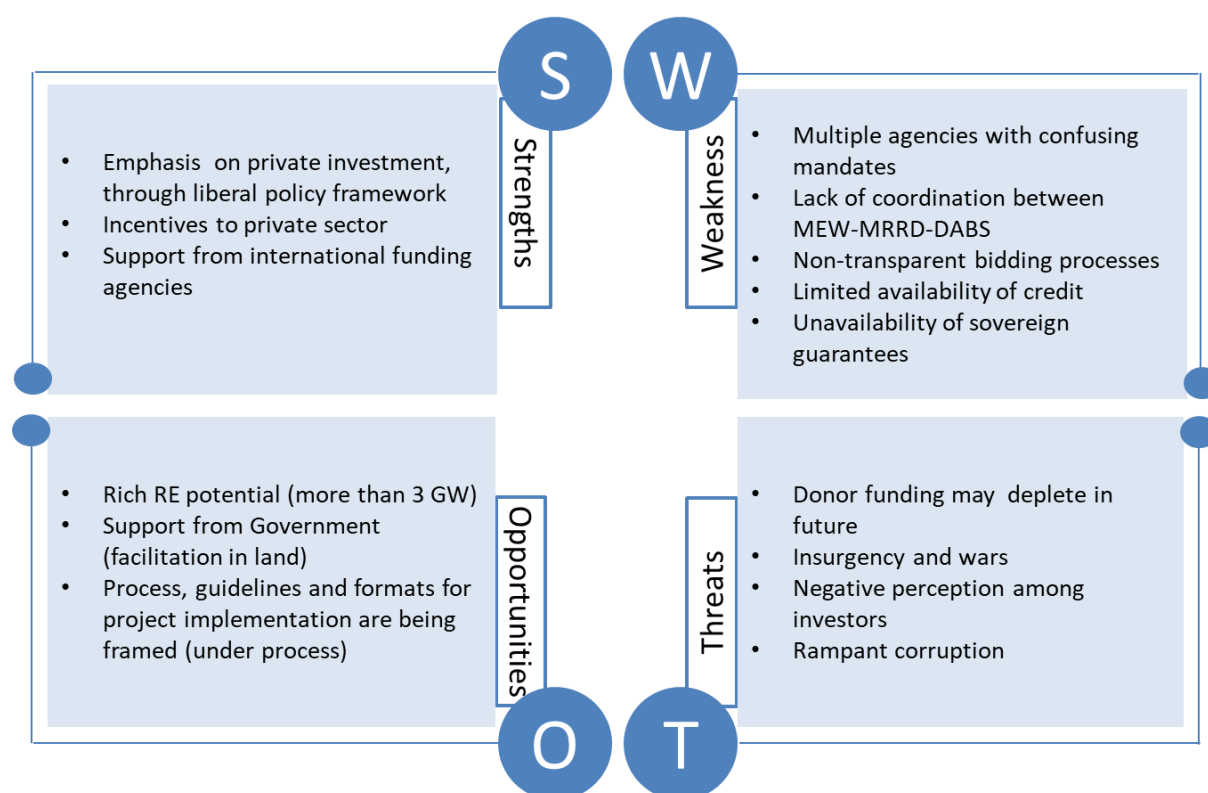
The success of policies in bringing private investment would hinge on the actual implementation on the ground. This in turn will depend on coordination between: a) various line ministries b) MEW/ MRRD and various institutions at provincial and local level as several planning processes such as site identification, selection and management of O&M contractors happen at the local level. The success will also depend on transparency in the bidding process, support provided by GIRoA in timely approvals and clearances, clear identification and allocation of risks between project developers and GIRoA (in case of PPP).

At present, there are several challenges affecting the power sector in addition to the shortcomings in the policies outlined earlier. Foremost, being the threat to physical assets owing to security reasons.

Other challenges include non-transparent project allocation in power sector<sup>38</sup>, lack of reputable companies with experience in insuring RE power projects, capacity constraints in various institutions which in turn delay the implementation of projects. This is reflected in the SWOT analysis given below.

Despite these challenges, given the right facilitation and support to private sector, investment can be mobilized in power sector. This is the primary objective with which the IPD has been set up. The following section provides clarity whether the extant policy framework has a provision for an agency like the IPD.

**Figure 14: SWOT Analysis of Afghanistan Power Sector**



## 9.1 Role of IPD in the Current Policy Framework

The existing policy framework, does not mention a body explicitly required to be set up to facilitate investments. The PPP policy calls for MEW to establish its own PPP unit to frame the procurement rules and guidelines for power sector.

Following is suggested for the smooth and effective functioning of the IPD. The suggestions below have been framed from the analysis of the Policy framework and interactions with MEW.

- IPD to function as the PPP unit under MEW:** In accordance with the provisions of the PPP policy, it is suggested that IPD also functions as the PPP unit of MEW by defining the guidelines for PPP in power sector, overall program management, monitoring and evaluation procedures etc. This will enable to streamline the operations in MEW and also eliminate the creation of additional institution.

<sup>38</sup> As per discussions held with MEW

- **Coordination with Ministries:** Given the role IPD is expected to play, it will be necessary for IPD to interact with Ministry of Commerce and Industries and MRRD on regular basis. The former provides business licenses to private sector while the latter is responsible for implementation of energy projects in the rural areas. It is suggested that IPD coordinates with these two ministries by establishing a formal process for regular communication and coordination. It is suggested that two officials are designated from each of these ministries as the point of contact for coordination and communication with the IPD.
- **Creation of in-house data bank:** IPD should have a data bank with details of projects, application formats, bid documents, proposal guidelines, feasibility studies, resource maps etc. to be able to guide the project developers and function effectively.

The above mentioned measures may be considered by GIRoA while setting up the IPD in the MEW.

**A10: Annexures****10.1 Afghanistan National Development Strategy (ANDS) – (2008-2013)**

The ANDS is the country's first poverty strategy reduction paper. It is based on the Millennium Development Goals (MDGs) and organized around three key pillars: (1) Security (2) Governance, rule of law and human rights (3) social and economic development. It highlights the following findings and recommendations for the energy sector:

**Key findings (Energy)**

- Achievements have been made during the implementation period of ANDS such as the expansion of public power grid and restructured energy governance.
- There are still many challenges in terms of enhancing rural energy access and attracting private investment in energy. Achievements in these outcomes are less than 50% of the targets set. In addition, the sector lacks capable and credible players (domestic and foreign) who are interested to implement projects in energy sector. Further, there is lack of adequate technical capacity.

**Key Recommendations**

- More focus should be given on private sector engagement and private investment in energy
- Improve rural access to electricity
- Foster technical capacity building and developing coordination mechanism among line ministries and institutions

**10.2 Power Sector Master Plan (PSMP)**

PSMP aims to identify the priorities, time frame and costs associated with power sector development goals. The duration of the PSMP is for 20 years from 2012-2032. The demand forecast was prepared in the PSMP for three scenarios till the year 2032, as indicated in the table below. The difference in the high and low scenarios from the base case is the variations assumed in economic development, connection rates and consumption levels.

**Table 9: Demand Projections in PSMP**

Scenario	Total Gross Demand (2032)	Total Peak Demand (2032)
Base case	18,400 Gwh	3,500 MW
Low demand	13,700 Gwh	2,600 MW
High demand	22,500 Gwh	4,300 MW

Based on the demand projections, generation capacities have been identified in hydro, thermal (coal, gas, diesel and oil) and RE (wind, solar, biomass and geo-thermal). The total investment required in the optimized scenario is as indicated in the table below. It appears that bulk of the investment in generation projects will happen in the last stage (2025-2032) because of high capital costs of hydro-power plants (3300 USD).

**Table 10: Total Investment Requirement in Optimized Scenario (Million USD)**

Overview on investment	Project Subtotal	Stage A (Up to 2015)	Stage B (Up to 2020)	Stage C (Up to 2025)	Stage D (Up to 2032)
Generation development	7,329.6	327.6	348.5	981.5	5,671.9
Major transmission projects	1,726.8	595.0	676.9	212.9	242.0
Transmission development Within the provinces	1,040.1	290.1	439.8	215.9	95.0

Overview on investment	Project Subtotal	Stage A (Up to 2015)	Stage B (Up to 2020)	Stage C (Up to 2025)	Stage D (Up to 2032)
<b>Total</b>	<b>10,096.5</b>	<b>1,212.7</b>	<b>1,465.2</b>	<b>1,410.3</b>	<b>6,008.9</b>

The PSMP has been criticized for having a “predict-then-act” approach, not grounded in a strategic view about optimum use resources embedded in economic reasoning. It has also been said that many of the projects proposed in PSMP are unrealistic in terms of scale, likelihood and timing if completion and therefore very optimistic.

### 10.3 Definitions of PPP Models

- 1) **Build-Operate-Transfer:** A contractual arrangement where the private party undertakes the financing and construction of an infrastructure project, and the operation and maintenance thereafter. The Private Party operates the facility over a fixed term and transfers the facility to the Government Agency at the end of the fixed term that shall be specified in the PPP agreement.
- 2) **Renovate-Operate-Transfer:** A contractual arrangement where an existing infrastructure facility is handed over to the Private Party to refurbish, operate and maintain with no time limitation imposed on ownership. The Private Party is allowed to collect user levies to recover its investment and operation and maintenance expenses in perpetuity.
- 3) **Build-Transfer:** A contractual arrangement where the Private Party undertakes the financing and construction of an infrastructure project and after its completion hands it over to the Government Agency. The Government Agency will reimburse the total project investment, on the basis of an agreed schedule.
- 4) **Build-Own-Operate:** A contractual arrangement where the Private Party is authorized to finance, construct, own, operate and maintain an infrastructure project, from which the Private Party is allowed to recover its investment and operating and maintenance expenses by collecting user levies from project users. The Private Party owns the project and may choose to assign its operation and maintenance to a project operator. The transfer of the project to the Government Agency is not envisaged in this arrangement. However, the Government Agency may terminate its obligations after the specified time period.
- 5) **Build-Lease-Transfer:** A contractual arrangement where the Private Party undertakes the financing and construction of an infrastructure project and upon its completion hands it over to the Government Agency on a lease arrangement for a fixed period, after the expiry of which ownership of the project is automatically transferred to the Government Agency.
- 6) **Design-Build-Finance-Operate:** A contractual arrangement where the private sector party is awarded a contract to design, construct, finance and operate a capital project. In consideration for performing its obligations under the agreement, the private sector party may be paid by the government agency (for example, availability payments) or from fees collected from the project's end users. The government or government-owned entity retains ownership of the project.
- 7) **Operating Concession:** A concession agreement is a negotiated contract between a company and a government that gives the company the right to operate a specific business within the government's jurisdiction, subject to certain conditions
- 8) **Lease Contracts:** A contract of public-private sector arrangements under which the private operator is responsible for operating and maintaining the utility but not for financing the investment.
- 9) **Management Contracts:** A contractual arrangement where the Government Agency entrusts the operation and management of an infrastructure project to the Private Party for an agreed period on payment of specified consideration. The Government Agency may charge the user

levies and collect the same either itself or entrust the collection for consideration to any person who shall pay the same to the Government Agency.

- 10) **Contract-Add-and-Operate:** A contractual arrangement where the Private Party expands an existing infrastructure facility, which it leases from the Government Agency. The Private Party operates the expanded project and collects user levies, to recover the investment over an agreed period. There may or may not be a transfer arrangement with regard to the added facility provided by the Private Party.

#### 10.4 Summary of Investment Friendly Policy Provisions

There are a number of investment friendly policy provisions highlighted in various policies. While some are specific (Private Investment Law, 2005), others require more clarity in terms of the quantum of subsidy, time frame till which those will be applicable. Clearances that are required are also not elaborated in any of the Policies, The following table provides a summary of various policies.

**Table 11: Summary of Investment Friendly Provisions in Different Laws and Policies**

Provisions	Private Investment Law, 2005	Power Services Regulation Act, 2015	PPP Law, 2016	ANREP, 2015	Rural Renewable Energy Policy, 2013	Investment Policy (Draft)	PPP Policy, 2017
Non-discrimination	✓	✓	x	x	x	x	x
Requirement of licences	x	✓	x	x	x	x	x
Models of PPP	x	x	✓	x	x	x	x
Method of procurement	x	x	✓	✓	x	x	x
Customs/export duty exemption	✓	x	x	✓	✓	x	x
Income tax exemptions	✓	x	x	✓	✓	x	x
Interest subsidy and soft loan	x	x	x	✓	✓	x	x
Land use	✓	✓	x	✓	x	x	x
Basis of Tariff determination	x	x	x	✓	x	x	x
Timelines for approvals	x	x	x	x	x	x	x
Clearances required	x	x	x	x	x	x	x
Regulatory authority and duties	x	✓	x	✓	x	x	x